

6 GEORGE V

SESSIONAL PAPER No. 20a

A. 1916

DEPARTMENT OF RAILWAYS AND CANALS

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CANAL STATISTICS

FOR THE

SEASON OF NAVIGATION

1915

*PRINTED BY ORDER OF PARLIAMENT*



OTTAWA

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EXCELLENT MAJESTY

1916

[No. 20a—1916.]



*To Field Marshal, His Royal Highness Prince Arthur William Patrick Albert,  
Duke of Connaught and of Strathearn, K.G., K.T., K.P., etc., etc., etc.,  
Governor General and Commander in Chief of the Dominion of Canada.*

MAY IT PLEASE YOUR ROYAL HIGHNESS,—

The undersigned has the honour to present to your Royal Highness, Canal Statistics for the year ended December 31, 1915.

All of which is respectfully submitted.

F. COCHRANE,

*Minister of Railways and Canals.*



To the Honourable F. COCHRANE,  
Minister of Railways and Canals.

SIR,—I have the honour to submit the annual report of the Comptroller of Statistics in relation to the operations of the Canals of the Dominion for the year ended December 31, 1915.

I have the honour to be, sir,

Your obedient servant,

A. W. CAMPBELL,  
*Deputy Minister of Railways and Canals.*



OFFICE OF THE COMPTROLLER OF STATISTICS,  
OTTAWA, February 18, 1916.

A. W. CAMPBELL, Esq., C.E.,  
Deputy Minister of Railways and Canals.

SIR,—I have the honour to submit herewith Canal Statistics for the year ended December 31, 1915.

Traffic through the Canals of Canada had a total volume of 15,198,803 tons, as compared with 37,023,237 tons, for the preceding year. The decrease amounted to 21,824,434 tons, or 58.9 per cent.

The following table gives in succinct form the record of canal traffic for 1915:—

	Tons.	Tons.		Tons.
		Increase.	Decrease.	
Sault Ste. Marie.....	7,750,957			19,848,227
Welland.....	3,061,012			799,957
St. Lawrence.....	3,409,467			982,026
Chamby.....	478,707	41,802		
St. Peter's.....	2,895			51,285
Murray.....	30,728			53,179
Ottawa.....	272,370			62,762
Rideau.....	120,781			30,958
Trent.....	49,904			17,811
St. Andrews.....	21,982			20,031
Total.....	15,198,803	41,802		21,866,236

It will be seen that 91.0 per cent of the decrease in 1915 occurred at Sault Ste. Marie. Of the decline of 19,848,227 tons at that gateway, 1,049,241 tons attached to Canadian traffic, and 18,798,986 tons to American traffic; or 5.1 in the former case and 94.9 in the latter. A study of the tables which will appear in other parts of these introductory observations, as well as in the body of this report, makes it clear that the decrease in both Canadian and American traffic was largely in the nature of a diversion to the American canal at Sault Ste. Marie. The cause of this diversion was the availability of a new lock on the American side, having a much larger capacity than the lock on the Canadian side. There are now three locks on the United States side of the St. Marys river, the last to be opened having a depth of 24.5 feet at extreme low water. There is but one lock on the Canadian side, with a minimum depth of 18.25 feet. The practicability of carrying a heavier load through the new American lock drew away nearly all the iron ore trade and a good deal of wheat from the Canadian canal.

The gross traffic through the canals since 1905 was as follows:—

	Tons.
1905.....	9,371,744
1906.....	10,523,185
1907.....	20,543,639
1908.....	17,502,820
1909.....	33,720,748
1910.....	42,990,608
1911.....	38,030,353
1912.....	47,587,245
1913.....	52,053,913
1914.....	37,023,237
1915.....	15,198,803

The following table shows the total traffic for 1914 and 1915 by canals and by months:—

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	Sault. Ste. Marie.	Welland.	St. Lawrence.	Chambly.	Ottawa.	Rideau.	St. Peters.	Murray.	Trent.	St. Andrews.	Total.	
1914.												
April.....	437,182	77,805	33,947	33,517	2,081	494	2,865	4,277	2,930	554,605		
May.....	3,939,578	569,909	655,929	74,959	60,860	73,030	27,823	5,726	16,194	5,307,123		
June.....	4,653,580	581,388	673,678	74,834	62,902	28,537	30,090	6,724	11,069	6,136,657		
July.....	4,749,845	618,038	764,625	84,919	54,515	24,210	6,017	11,540	11,370	6,339,831		
August.....	4,799,387	583,441	681,136	80,400	36,475	16,944	3,565	3,565	13,004	5,833	6,261,380	
September.....	4,669,372	593,822	635,327	58,830	31,137	16,633	18,071	3,490	13,684	6,099,946		
October.....	3,355,305	537,729	626,996	29,448	14,132	7,502	10,605	8,315	13,574	1,360	4,660,484	
November.....	815,235	270,337	311,281	8,574	.....	.....	12,034	8,575	1,927	1,500	1,470,471	
December.....	179,700	28,500	.....	.....	.....	.....	4,466	1,500	.....	.....	222,740	
Total.....	27,599,184	3,860,969	4,391,493	436,905	335,132	151,739	54,180	83,907	67,715	42,013	37,023,237	
1915.												
April.....	115,684	170,343	97,090	7,724	4,472	38,195	21,367	2,200	728	1,988	398,350	
May.....	318,488	450,178	523,260	65,675	507,289	79,571	32,989	24,171	179	1,925	1,426,805	
June.....	371,484	441,911	396,012	459,515	84,897	56,265	19,371	4,194	.....	10,459	1,472,670	
July.....	552,410	396,012	427,962	508,199	74,627	37,512	10,810	3,962	.....	13,554	1,625	1,587,611
August.....	748,770	425,272	457,765	69,096	49,886	15,291	4,076	8,045	.....	9,020	1,829,021	
September.....	1,390,240	425,636	522,425	60,412	40,503	19,501	4,685	5,082	.....	7,400	2,424,717	
October.....	2,271,098	311,480	36,705	12,548	10,270	.....	6,982	6,128	.....	2,144	3,354,829	
November.....	1,634,451	268,961	54,737	22,444	.....	.....	1,704	2,126	42	1,000	2,278,245	
December.....	348,332	.....	.....	.....	.....	.....	.....	.....	.....	.....	426,555	
Total.....	7,750,957	3,061,012	3,409,467	478,707	272,370	120,781	2,895	30,728	49,904	21,982	15,198,803	

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Following is a summary of traffic, by months, during the past five years:—

—	1911.	1912.	1913.	1914.	1915.
	Tons.	Tons.	Tons.	Tons.	Tons.
January.....	254	181	397	494	
April.....	722,311	77,871	875,226	554,111	398,350
May.....	5,170,587	6,134,122	7,260,227	5,307,123	1,426,805
June.....	5,451,549	6,851,248	7,647,189	6,136,657	1,472,670
July.....	5,798,169	7,054,060	8,137,169	6,339,831	1,587,611
August.....	5,778,187	7,159,871	7,625,782	6,261,380	1,829,021
September.....	5,466,054	6,983,913	7,531,379	6,069,946	2,424,717
October.....	5,514,042	7,321,846	7,350,914	4,660,484	3,354,829
November.....	3,657,824	5,369,493	4,891,143	1,470,471	2,278,245
December.....	471,376	634,640	734,487	222,740	426,555
Total.....	38,030,353	47,587,245	52,053,913	37,023,237	15,198,803

The following further summary gives the record of traffic, by canals, for 1910 and succeeding years:—

—	1910.	1911.	1912.	1913.	1914.	1915.
Sault Ste. Marie.....	36,395,687	30,951,709	39,669,655	42,699,324	27,599,184	7,750,957
Welland.....	2,326,290	2,537,629	2,851,915	3,570,714	3,860,969	3,061,012
St. Lawrence.....	2,760,752	3,105,708	3,477,188	4,302,427	4,391,493	3,409,467
Chamby.....	669,299	599,829	618,415	555,602	436,905	478,707
St. Peters.....	85,951	75,298	74,809	71,514	54,180	2,895
Murray.....	177,941	163,457	170,081	180,576	83,907	30,728
Ottawa.....	385,261	320,071	392,350	365,438	335,132	272,370
Rideau.....	134,881	172,227	160,133	171,223	151,739	120,781
Trent.....	46,263	57,290	77,150	55,800	67,715	49,904
St. Andrews.....	8,283	47,135	95,549	81,295	42,013	21,982

Eliminating all duplications, the net tonnage for 1915 is shown in the following table:—

Canals.	Canadian.	United States.	Net Tonnage	Gross Tonnage
			Tons.	Tons.
Sault Ste. Marie.....	2,446,055	5,184,427	7,630,482	7,750,957
Welland.....	847,190	1,623,268	2,470,458	3,061,012
St. Lawrence.....	942,078	405,828	1,347,906	3,409,467
Chamby.....	262,752	186,516	449,268	478,707
Ottawa.....	210,375		210,375	272,370
Rideau.....	120,781		120,781	120,781
St. Peters.....	2,895		2,895	2,895
Trent.....	49,904	2,786	49,904	49,904
Murray.....	27,942		30,728	30,728
St. Andrews.....	21,982		21,982	21,982
Total.....	4,931,954	7,402,825	12,334,779	15,198,803

The traffic of 1915 and 1914 is analyzed by classes of commodities in the following tabular statement:—

Canals.	Agricultural Products.	Animal Products.	Manufactures.	Products of Forest.	Products of Mines.	Total.
1915.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Sault Ste. Marie.....	2,655,789	655	441,293	89,218	4,564,002	7,750,957
Welland.....	1,306,803	1	320,442	308,660	1,125,106	3,061,012
St. Lawrence.....	1,204,523	4,685	276,713	601,255	1,322,291	3,409,467
Chambly.....	7,163	784	21,605	280,117	169,038	478,707
St. Peters.....	381	10	322	179	2,003	2,895
Murray.....	153	271	6,523	.....	23,781	30,728
Ottawa.....	4,202	2,889	16,089	155,669	93,521	272,370
Rideau.....	1,521	1,690	10,186	10,211	97,173	120,781
Trent.....	1,990	299	2,751	44,575	289	49,904
St. Andrew's.....	.....	5	187	4,894	16,896	21,982
Total.....	5,182,525	11,289	1,096,111	1,494,778	7,414,100	15,198,803
1914.						
Sault Ste. Marie.....	3,799,337	217	487,789	40,956	23,270,885	27,599,184
Welland.....	2,116,378	275	361,174	360,434	1,022,708	3,860,969
St. Lawrence.....	2,020,035	6,905	297,269	668,775	1,398,509	4,391,493
Chambly.....	9,248	211	11,111	293,242	123,093	436,905
St. Peters.....	11,845	1,543	4,117	3,126	33,549	54,180
Murray.....	149	.....	21,605	430	61,723	83,907
Ottawa.....	3,032	3,183	18,663	171,440	138,814	335,132
Rideau.....	2,027	3,010	13,466	15,041	118,195	151,739
Trent.....	795	336	3,043	62,473	1,068	67,715
St. Andrews.....	22	1	288	6,050	35,652	42,013
Total.....	7,962,868	15,681	1,218,525	1,621,967	26,204,196	37,023,237
					Decrease. Tons.	Decrease. Per cent.
Sault Ste. Marie.....	.....	.....	.....	.....	19,848,227	91.0
Welland.....	.....	.....	.....	.....	799,957	3.8
St. Lawrence.....	.....	.....	.....	.....	982,026	4.5
Chambly.....	.....	.....	.....	.....	41,802	.....
St. Peters.....	.....	.....	.....	.....	51,285	2.3
Murray.....	.....	.....	.....	.....	53,179	2.4
Ottawa.....	.....	.....	.....	.....	62,762	2.9
Rideau.....	.....	.....	.....	.....	30,958	1.4
Trent.....	.....	.....	.....	.....	17,811	.8
St. Andrews.....	.....	.....	.....	.....	20,031	.9
Net decrease.....	.....	.....	.....	.....	21,824,434	.....

The following statement shows the tonnage of commodities by classes moved through all the canals in 1915:—

	Tons.
Agricultural products.....	5,182,525
Animal products.....	11,289
Manufactures.....	1,096,111
Products of the forest.....	1,494,778
Products of the mine.....	7,414,100
Total.....	15,198,803

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Following were the percentages attaching to each commodity class in 1915 and five preceding years:—

	1910.	1911.	1912.	1913.	1914.	1915.
	Per cent.					
Agricultural products.....	10.2	14.2	14.51	16.40	21.51	34.11
Animal products.....	1.2	.1	.04	.04	.04	.07
Manufactures.....	5.2	6.2	4.68	3.61	3.29	7.21
Products of forests.....	3.9	4.0	3.43	3.22	4.38	9.83
Products of mines.....	79.5	75.5	77.34	76.73	70.78	48.78

The rise in the ratio of agricultural products and the decline in products of the mines are striking features of the traffic situation in 1915.

## CANADIAN AND AMERICAN TRAFFIC.

The canals of Canada and the United States being free of tolls, or restrictions of any character, there is absolute reciprocity in the use made of them by the vessels of each nation.

The following table shows the number and tonnage of Canadian and American vessels, and also the tonnage of Canadian and American traffic, which passed through the canals of Canada in 1908 and succeeding years:—

Year.	Canadian Vessels.		U. S. Vessels.		Freight Tonnage.		
	No.	Tonnage.	No.	Tonnage.	Canadian.	United States.	Total.
1908.....	29,040	6,780,789	7,489	4,835,320	5,012,147	12,190,673	17,502,820
1909	22,507	7,811,578	9,996	16,459,322	7,378,057	26,342,691	33,720,748
1910	25,337	8,931,790	11,462	21,777,297	7,883,614	35,106,994	42,990,608
1911	25,585	9,172,192	10,370	18,231,622	7,792,907	30,237,446	38,030,353
1912	27,371	10,237,335	11,785	24,636,190	9,376,529	38,210,716	47,587,245
1913	28,654	12,078,041	10,739	24,238,788	11,130,875	40,923,038	52,053,913
1914	26,125	12,050,856	7,742	15,636,414	9,382,206	27,641,031	37,023,237
1915	21,575	9,398,207	6,415	7,335,101	6,789,423	8,409,380	15,198,803

Reducing the foregoing figures with respect to freight tonnage to a percentage basis, the result is as follows:—

Year.	Canadian Per Cent.	American Per Cent.
1908	28.7	71.3
1909	21.8	78.2
1910	18.3	81.7
1911	20.5	79.5
1912	19.7	80.3
1913	21.3	78.7
1914	25.3	74.7
1915	44.7	55.3

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It will be observed that, while there was an actual decrease in the volume of Canadian traffic which passed through the canals of Canada in 1915, the ratio of that traffic to the total was materially raised. This was due to the still larger decrease in American tonnage which sought Canadian channels.

It must be distinctly borne in mind, however, that all the freight tonnage of Canada did not pass through Canadian canals. Some of it has always been moved through the American canal at Sault Ste. Marie, and in 1915 the volume thus diverted was larger than in any year since the Canadian lock at that point was opened in 1895. The volume of traffic thus transported in 1915 was 1,802,269 tons. Adding this tonnage to the net Canadian tonnage indicated in a preceding paragraph, a final aggregate of 6,734,223 tons is had. The total net Canadian business of 1915 was therefore 144,183 tons greater than for 1914. Summarized for two years the facts are as follows:—

	Net Canadian Tonnage.
1914.....	6,590,040
1915.....	6,734,223

Dealing now with gross Canadian and American tonnage through all the canals of Canada, the following statement gives the facts:—

Canals.	Total Traffic.	Canadian Tons.	Per Cent.	American Tons.	Per Cent.
Sault Ste. Marie.....	7,750,957	2,561,734	33.0	5,189,223	67.0
Welland .....	3,061,012	1,426,256	46.6	1,634,756	53.4
St. Lawrence.....	3,409,467	2,024,755	59.3	1,384,712	40.7
Chambly .....	478,707	292,191	61.0	186,516	39.0
St. Peters.....	2,895	2,895	100.0		
Murray .....	30,728	27,942	90.9	2,786	9.1
Ottawa .....	272,370	267,406	98.1	4,964	1.9
Rideau.....	120,781	114,358	94.7	6,423	5.3
Trent .....	49,904	49,904	100.0		
St. Andrews.....	21,982	21,982	100.0		
	15,198,803	6,789,423	44.67	8,409,380	55.33

These figures, as has already been made clear, include duplication. A through cargo from Fort William-Port Arthur to Montreal, for example, would be recorded three times—first, at the Soo, next at the Welland, and finally at the St. Lawrence group. There were, however, in 1915 fewer through cargoes than usual. The pressure of traffic during the autumn months was so great that more traffic than in normal years was carried to Georgian Bay ports and to Port Colborne. In the latter case, steamers merely transferred their loads to either smaller vessels or to the railways. With a larger volume of traffic available at the head of the Great Lakes, the total eastward movement fell 482,567 tons below the record for 1914, or from 3,067,497 to 2,584,930 tons.

Sault Ste. Marie is the chief gateway of waterborne commerce on the Great Lakes and the St. Lawrence river, and what takes place at that point has a

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special bearing on the traffic situation as a whole. The Canadian canal at that point was opened in 1895, and since that year the record of traffic is as follows:—

Canadian Canal Year.	Total Traffic.	Canadian Traffic.	Per cent Canadian.	American Traffic.	Per cent American.
1896	4,557,399	321,770	7.0	4,255,629	93.0
1897	4,947,063	337,146	6.8	4,609,737	93.2
1898	3,055,287	146,539	4.8	2,908,748	95.2
1899	3,006,664	299,975	9.9	2,706,629	90.1
1900	2,035,677	255,264	12.5	1,880,413	87.5
1901	2,820,394	494,613	17.5	2,325,781	82.5
1902	4,729,268	1,140,623	24.1	3,588,645	75.9
1903	5,511,868	1,362,820	24.7	4,149,048	75.3
1904	5,030,705	1,212,145	24.1	3,818,360	75.9
1905	5,473,406	1,304,355	23.8	4,169,051	76.2
1906	6,574,046	1,632,683	24.8	4,941,363	75.2
1907	15,588,165	1,957,334	12.5	13,630,831	87.5
1908	12,759,216	2,113,160	16.5	10,646,056	83.5
1909	27,861,245	2,767,875	9.1	25,093,370	90.9
1910	36,395,687	2,941,229	8.1	33,454,458	91.9
1911	30,951,709	3,167,936	10.2	27,783,773	89.8
1912	39,669,655	3,808,157	9.6	35,861,498	90.4
1913	42,699,324	4,816,718	11.3	37,882,606	88.7
1914	27,599,184	3,609,747	13.1	23,989,437	86.9
1915	7,750,957	2,561,734	33.0	5,189,223	67.0

It will be observed that the Canadian percentage increased materially, while the American was correspondingly lowered. This was due much less to the larger volume of Canadian business than to the diversion of both Canadian and American tonnage to the new lock on the United States side of the St. Marys river.

The foregoing table will not, however, be understood in the absence of certain salient facts showing the character of American traffic through the Canadian canal at Sault Ste. Marie. Iron and copper ores have played a large part in that movement, and the following table has been prepared to show the situation in that regard:—

Year.	American Traffic through Canadian Canal.			Ore included in foregoing total.	Per cent of Ore.	Commodities other than Ore.	Per cent of other Commodities.
	Up.	Down.	Total.				
	Tons.	Tons.	Tons.	Tons.		Tons.	
1905	1,028,871	3,140,180	4,169,051	2,910,118	69.9	1,258,933	30.1
1906	1,367,796	3,573,567	4,941,363	2,929,366	59.3	1,011,997	40.7
1907	2,604,741	11,026,090	13,630,831	9,995,242	73.2	3,635,589	26.8
1908	2,419,709	8,226,347	10,646,056	7,362,351	69.1	3,283,705	30.9
1909	2,737,101	22,356,269	25,093,370	21,156,915	84.3	3,936,455	15.7
1910	4,004,538	29,449,920	33,454,458	28,440,952	85.0	5,013,506	15.0
1911	4,307,187	23,476,586	27,783,773	22,654,029	81.5	5,129,744	18.5
1912	3,133,638	32,727,860	35,861,498	31,134,251	87.0	4,727,247	13.0
1913	4,238,829	33,643,777	37,882,606	32,386,866	85.5	5,495,740	14.5
1914	2,398,944	21,737,678	24,136,622	20,817,953	86.2	3,318,669	13.8
1915	509,788	4,741,552	5,251,340	4,004,426	76.3	1,246,914	23.7

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The foregoing total is slightly higher than the total shown in Table 7, owing to the fact that Canadian wheat shipped from Duluth in bond is unavoidably classified with American traffic.

Following is a comparison of eastbound Canadian and American traffic at Sault Ste. Marie, exclusive of ore:—

Year.	Canadian Eastbound exclusive of ore.	Per cent of total Eastbound	American Eastbound exclusive of ore.	Per cent of total Eastbound
1905	838,537	82.7	303,630	9.7
1906	1,112,742	92.8	721,320	20.2
1907	1,446,788	91.7	1,142,468	10.3
1908	1,585,549	92.3	986,614	11.9
1909	2,038,245	98.0	1,229,282	5.5
1910	2,132,620	100.0	962,062	3.3
1911	2,466,806	99.1	820,488	3.5
1912	3,019,998	99.8	1,576,646	4.8
1913	4,114,402	99.0	1,271,882	3.8
1914	2,985,114	97.1	919,725	4.2
1915	2,134,546	97.1	737,126	15.5

At the Welland canal ores disappear as a factor in traffic. The situation at that important gateway between the upper Great Lakes and the St. Lawrence is summarized in the following statement:—

#### TRAFFIC THROUGH THE WELLAND CANAL.

Year.	Canadian— Up.	Per cent.	Canadian— Down.	Per cent.	United States— Up.	Per cent.	United States— Down.	Per cent.
	Tons.		Tons.		Tons.		Tons.	
1887	61,310	41.3	87,159	58.7	265,738	31.9	565,928	68.1
1891	25,260	25.8	72,522	74.2	264,952	30.2	612,279	69.8
1896	19,369	8.8	200,294	91.2	271,900	25.6	788,424	74.4
1897	12,091	6.3	179,998	93.7	212,108	19.6	570,095	80.4
1898	11,904	8.5	127,236	91.5	211,502	21.1	789,435	78.9
1899	17,464	10.2	153,174	89.8	135,038	21.8	484,094	78.2
1900	18,670	11.0	150,378	89.0	99,560	18.1	450,752	81.9
1901	22,804	10.2	200,693	89.8	83,601	21.1	313,111	78.9
1902	39,760	16.2	204,398	83.8	44,994	10.7	376,235	89.3
1903	116,143	34.6	220,152	65.4	153,947	23.1	512,677	76.9
1904	94,353	27.1	253,920	72.9	90,855	19.6	372,243	80.4
1905	104,490	24.6	319,944	75.4	127,569	19.1	540,047	80.9
1906	131,502	24.2	410,749	75.8	91,366	13.8	568,350	86.2
1907	202,051	29.6	479,292	70.4	188,113	20.1	744,676	79.9
1908	163,447	21.7	587,239	78.3	247,513	25.9	705,254	74.1
1909	382,041	37.5	635,187	62.5	260,048	25.7	748,675	74.3
1910	420,407	35.9	749,891	64.1	304,427	26.3	851,565	73.7
1911	508,865	38.0	828,085	62.0	334,054	27.8	866,625	72.2
1912	578,251	37.1	979,525	62.9	247,471	19.1	1,046,668	80.9
1913	641,402	32.4	1,338,274	67.6	363,701	22.9	1,227,337	77.1
1914	504,487	22.2	1,769,502	77.8	351,562	22.2	1,235,418	77.8
1915	422,996	27.6	1,108,332	72.4	333,464	21.8	1,196,220	78.2

## TRANSPORTATION OF CANADIAN WHEAT.

The volume of Canadian wheat moved by water in 1915 was the largest in the history of the Dominion, although an unprecedented proportion passed through the American canal at Sault Ste. Marie. The cause of the diversion has already been stated. There was special urgency in connection with the shipment of wheat eastward, and the new American lock permitted vessels to carry heavier loads than did the Canadian lock. The choice of either the American or the Canadian canal at Sault Ste. Marie has for years turned upon the judgment of steamer captains at the moment when lockages were desired. This year, however, the deeper water in the American lock led, under the circumstances to which allusion has been made, to that channel being chosen for a majority of the steamers carrying Canadian wheat from the head of lake Superior.

Since 1895 the volume of Canadian wheat annually carried through the Canadian canal at Sault Ste. Marie has been as follows:—

	Bushels.
1895.....	1,087,800
1896.....	7,274,000
1897.....	9,130,167
1898.....	3,456,934
1899.....	7,699,267
1900.....	5,573,267
1901.....	5,893,034
1902.....	19,896,900
1903.....	25,807,800
1904.....	25,250,969
1905.....	22,603,500
1906.....	26,361,400
1907.....	34,602,000
1908.....	41,793,300
1909.....	48,047,833
1910.....	51,774,833
1911.....	63,641,000
1912.....	83,743,034
1913.....	101,066,133
1914.....	77,467,833
1915.....	48,727,911

The foregoing totals do not represent all the Canadian wheat moved eastward. Many millions of bushels have passed through the American canal each year. It should also be borne in mind that prior to 1909 Canadian wheat carried from Duluth in bond was classified as American wheat.

In 1915 there were 121,389,950 bushels of Canadian wheat transported through the American canal at Sault Ste. Marie. Added to the volume passed through the Canadian canal, a total of 170,117,861 bushels is had. A summary for 1914 and 1915 is as follows:—

	1914.	1915.
	Bushels.	Bushels.
Through the Canadian canal.....	77,467,833	48,727,911
Through the American canal.....	17,564,233	121,389,950
 Total.....	 95,032,066	 170,117,861

A further calculation is necessary in order to account for all the Canadian wheat moved eastward in 1915. Some of it was brought down in the form of flour. There were, in fact, 1,776,230 barrels of Canadian flour moved through the Canadian canal and 438,868 barrels through the American canal, making a total of 2,215,098 barrels. At  $41\frac{1}{2}$  bushels to the barrel, the volume of flour would be equal to 9,967,941 bushels of wheat. The complete account for 1915 would therefore stand as follows:—

	Bushels.
Through the Canadian canal.....	48,727,911
Through the American canal.....	121,389,950
In the form of flour.....	9,967,941
 Total.....	 180,085,802

A summary of Canadian wheat carried through the Canadian and American canals at Sault Ste. Marie in 1912 and succeeding years is as follows:—

	Bushels.
1912.....	109,842,031
1913.....	141,726,899
1914.....	95,032,066
1915.....	170,117,861

During the year 1915 careful records were made of the distribution of Canadian waterborne wheat. For the three years beginning 1913 the movement through both the Canadian and American canals at Sault Ste. Marie was as follows:—

From	1913.	1914.	1915.			
				Bushels.	Bushels.	Bushels.
<b>Port Arthur-Fort William.</b>						
To Montreal.....	11,950,433	9,624,600	3,512,410			
“ Georgian Bay ports.....	24,448,134	21,086,566	25,065,999			
“ other Canadian ports.....	28,045,733	33,132,733	33,067,613			
“ Buffalo.....	67,701,900	24,974,767	106,784,542			
 Total.....	 132,146,200	 88,818,666	 168,430,564			

To account for all the Canadian wheat shipped eastward by water in 1915 there must be added the quantity passed through Duluth in bond. The complete statement would therefore be as follows:—

From	1913.	Per cent.	1914.	Per cent.	1915.	Per cent.
Port Arthur-Fort William and Duluth	Bushels.		Bushels.		Bushels.	
To Montreal.....	15,186,632	10.7	10,283,166	10.8	4,025,010	2.4
“ Georgian Bay ports.....	26,054,001	18.4	24,864,466	26.2	25,315,999	14.9
“ other Canadian ports.....	28,973,333	20.5	34,350,700	36.2	33,067,613	19.4
“ Buffalo.....	71,522,933	50.4	25,533,734	26.8	107,709,239	63.3
 Total	 141,726,899		 95,032,066		 170,117,861	

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It will be seen that wide fluctuations have taken place during the past two years in the distribution of Canadian waterborne wheat. The proportion diverted from all Canadian channels to Buffalo in 1915 was the highest of any year since the facts were available.

"Other Canadian ports" in the foregoing and succeeding statements must be understood as being ports between Georgian bay and lake Ontario. For more than ninety per cent of the traffic the term means Port Colborne, which is the chief port of transfer at the eastern end of lake Erie and the western entrance to the Welland canal.

Following is a summary of the volume moved in 1909 and succeeding years through both canals at Sault Ste. Marie:—

Canadian Wheat.	1909.	1910.	1911.
	Bushels.	Bushels.	Bushels.
Fort William to Montreal.....	10,517,266	13,185,370	12,761,666
"    "    Georgian bay.....	13,384,400	12,753,200	9,881,234
"    "    other Canadian ports.....	10,149,633	9,603,400	11,880,666
"    "    Buffalo.....	12,841,334	15,693,363	27,945,600
Duluth to Montreal.....	520,000	315,000	
"    "    Buffalo.....	528,200	224,500	710,334
"    "    Georgian bay.....	28,000		461,500
"    "    other Canadian ports.....	79,000		
Unclassified.....			
<b>Total.....</b>	<b>48,047,833</b>	<b>51,774,833</b>	<b>63,641,000</b>
Through American canal.....	9,117,328	5,321,446	1,981,481
<b>Grand total.....</b>	<b>57,165,161</b>	<b>57,096,279</b>	<b>65,622,481</b>

Canadian Wheat.	1912.	1913.	1914.	1915.
	Bushels.	Bushels.	Bushels.	Bushels.
Fort William to Montreal.....	14,929,099	11,950,433	9,624,600	3,512,410
"    "    Georgian bay.....	19,501,168	24,448,134	21,086,566	25,065,999
"    "    other Canadian ports.....	20,458,700	28,045,733	33,132,733	23,067,613
"    "    Buffalo.....	44,228,266	67,701,900	24,974,767	106,784,542
Duluth to Montreal.....	283,500	3,236,199	658,566	512,600
"    "    Buffalo.....	5,714,367	3,811,033	3,777,900	250,000
"    "    Georgian bay.....	1,418,767	1,605,867	1,217,967	
"    "    other Canadian ports.....	230,000	927,600	558,967	924,697
Unclassified.....	3,078,164			
<b>Total.....</b>	<b>109,842,031</b>	<b>141,726,899</b>	<b>95,032,066</b>	<b>170,117,861</b>

During the past three years a careful record has been made of the movement of Canadian wheat through both the Canadian and American canal at Sault Ste. Marie, by months. The information thus given has considerable value. The facts for 1913, 1914 and 1915 follow:—

Canadian and American Canals.	April.	May.	June.	July.	August.
1913.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
Fort William and Port Arthur to—					
Montreal.....	634,600	2,218,900	1,845,667	1,407,733	1,097,900
Georgian bay.....	2,425,263	2,941,136	1,132,833	1,169,965	532,576
Other Canadian ports.....	1,612,800	2,901,488	3,270,066	2,652,300	1,848,400
Buffalo.....	7,012,984	5,859,935	1,206,130	486,862	...
Duluth and Superior to—					
Montreal.....	202,500	428,753	239,403	75,040	187,000
Georgian bay.....	330,000	86,066	...	...	...
Other Canadian ports.....	...	77,600	109,000	...	...
Buffalo.....	748,610	1,975,878	594,948	351,434	...
Total.....	12,966,757	16,489,756	8,398,047	6,143,334	3,665,876

Canadian and American Canals.	September	October.	November.	December.	Total.
1913.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
Fort William and Port Arthur to—					
Montreal.....	1,584,500	2,034,867	1,052,900	73,367	11,950,434
Georgian bay.....	681,764	6,307,332	6,807,900	1,949,400	23,948,169
Other Canadian ports.....	2,547,040	6,869,233	4,580,900	1,763,500	28,045,727
Buffalo.....	4,147,427	19,381,496	19,706,857	10,089,410	67,891,101
Duluth and Superior to—					
Montreal.....	433,500	504,455	204,500	...	2,275,151
Georgian bay.....	...	61,000	185,000	...	662,066
Other Canadian ports.....	204,000	...	...	...	390,600
Buffalo.....	100,700	525,000	...	...	4,296,570
Total	9,698,931	35,683,383	32,538,057	13,875,677	139,459,818

Canadian and American Canals.	April.	May.	June.	July.	August.
1914.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
Fort William to Montreal.....	1,175,000	2,074,733	1,329,067	1,235,334	474,933
" " Georgian bay.....	778,300	3,405,133	839,334	1,193,533	371,600
" " other Canadian ports.....	924,000	5,403,233	3,417,600	2,730,200	1,211,000
" " Buffalo.....	2,834,100	5,549,700	844,266	1,150,433	293,334
Duluth to Montreal.....	...	78,000	...	107,000	...
" Georgian bay.....	355,833	2,098,067	326,000	117,000	...
" other Canadian ports.....	...	...	744,000	128,100	48,866
" Buffalo.....	...	...	41,567	393,400	...
Total.....	6,067,233	18,608,866	7,541,834	7,055,000	2,399,733

Canadian and American Canals.	September.	October.	November.	December.	Total.
1914.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
Fort William to Montreal.....	1,229,700	1,212,300	833,533	60,000	9,624,600
" " Georgian bay.....	1,335,567	2,891,500	7,642,100	2,629,500	21,086,567
" " other Canadian ports.....	6,407,866	8,855,000	3,218,200	965,634	33,132,733
" " Buffalo.....	2,780,467	4,983,600	4,810,367	1,728,500	24,974,767
Duluth to Montreal.....	353,000	71,500	49,066	...	658,566
" Georgian bay.....	881,000	...	...	...	3,777,900
" other Canadian ports.....	99,000	198,000	...	...	1,217,966
" Buffalo.....	...	48,200	46,300	29,500	558,967
Total.....	13,086,600	18,260,100	16,599,566	5,413,134	95,032,066

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Canadian Canal.	April.	May.	June.	July.	August.
1915.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
<b>Fort William-Port Arthur to—</b>					
Montreal	964,450	229,422	176,000	363,200	300,000
Georgian bay.....	120,000	163,870	521,473	540,688	881,071
•Other Canadian ports.....	428,000	1,561,371	1,017,500	394,000	634,000
Buffalo		340,000	188,200	317,830	
<b>Duluth-Superior to—</b>					
Montreal					
Georgian bay.....					
Other Canadian ports.....					
Buffalo					
<b>Total.....</b>	<b>1,512,450</b>	<b>2,294,663</b>	<b>1,903,173</b>	<b>1,615,718</b>	<b>1,815,071</b>
Canadian Canal.	September.	October.	November.	December.	Total.
1915.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
<b>Fort William-Port Arthur to—</b>					
Montreal	399,138	550,700	37,000	30,000	3,049,910
Georgian bay.....	1,860,430	3,740,811	4,437,773	2,465,350	14,731,466
Other Canadian ports.....	2,446,724	3,657,940	3,883,500	2,487,500	16,510,535
Buffalo	992,594	5,390,272	4,744,604	1,695,500	13,669,000
<b>Duluth-Superior to—</b>					
Montreal					
Georgian bay.....	250,000				250,000
Other Canadian ports.....					
Buffalo	87,000	350,000	80,000		517,000
<b>Total.....</b>	<b>6,035,886</b>	<b>13,689,723</b>	<b>13,182,877</b>	<b>6,678,350</b>	<b>48,727,911</b>
American Canal.	April.	May.	June.	July.	August.
1915.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
<b>Fort William-Port Arthur to—</b>					
Montreal	111,000	306,500		45,000	
Georgian bay.....	307,500	83,200	34,399	320,000	
Other Canadian ports.....	2,689,000	4,621,637	963,000	756,000	165,000
Buffalo.....	3,635,691	1,838,378	415,400	540,465	204,000
<b>Duluth-Superior to—</b>					
Montreal.....	47,000	145,000	75,300		
Georgian bay.....					
Other Canadian ports.....					
Buffalo.....					
<b>Total.....</b>	<b>6,790,191</b>	<b>6,994,715</b>	<b>1,488,099</b>	<b>1,661,465</b>	<b>369,000</b>
American Canal.	September.	October.	November.	December.	Total.
1915.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
<b>Fort William-Port Arthur to—</b>					
Montreal					462,500
Georgian bay.....	574,941	4,222,493	3,581,000	1,211,000	10,334,533
Other Canadian ports.....	1,280,000	2,926,196	1,976,000	1,180,245	16,557,078
Buffalo.....	4,314,446	25,717,061	31,685,181	24,764,920	93,115,542
<b>Duluth-Superior to—</b>					
Montreal		98,500	146,800		
Georgian bay.....					
Other Canadian ports.....					
Buffalo.....	154,500		41,000	212,197	407,697
<b>Total.....</b>	<b>6,323,887</b>	<b>32,964,250</b>	<b>37,429,981</b>	<b>27,368,362</b>	<b>121,389,950</b>

Canadian and American Canals.	April.	May.	June.	July.	August.
1915.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
<b>Fort William—Port Arthur to—</b>					
Montreal.....	1,075,450	535,922	176,000	408,200	300,000
Georgian bay.....	427,500	247,070	555,872	860,688	881,071
Other Canadian ports.....	3,117,000	6,183,008	1,980,500	1,150,000	799,000
Buffalo.....	3,635,691	2,178,378	603,600	858,295	204,000
<b>Duluth—Superior to—</b>					
Montreal.....	47,000	145,000	75,300		
Georgian bay.....					
Other Canadian ports.....					
Buffalo.....					
<b>Total.....</b>	<b>8,302,641</b>	<b>9,289,378</b>	<b>3,391,272</b>	<b>3,277,183</b>	<b>2,184,071</b>

Canadian and American Canals.	September.	October.	November	December.	Total.
1915.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
<b>Fort William—Port Arthur to—</b>					
Montreal.....	399,138	550,700	37,000	30,000	3,512,410
Georgian bay.....	2,435,371	7,963,304	8,018,773	3,676,350	25,065,999
Other Canadian ports.....	3,726,724	6,584,136	5,859,500	3,667,745	33,067,613
Buffalo.....	5,307,040	31,107,333	36,429,785	26,460,420	106,784,542
<b>Duluth—Superior to—</b>					
Montreal.....		98,500	146,800		512,600
Georgian bay.....	250,000				250,000
Other Canadian ports.....	241,500	350,000	121,000	212,197	924,697
<b>Total.....</b>	<b>12,359,773</b>	<b>46,653,973</b>	<b>50,612,858</b>	<b>34,046,712</b>	<b>170,117,861</b>

There was a very large volume of wheat moving during the year 1915 from Port Colborne to Montreal, which might properly be added to the foregoing total for Fort William—Port Arthur to Montreal. Port Colborne was used as a port of transfer. It might, in fact, be assumed that nearly all of the 33,067,613 moved from the head of the Great Lakes to "other Canadian ports" actually went to Montreal.

A helpful light is thrown on the foregoing table when the monthly totals are reduced to a percentage basis, as follows:—

April.....	4.8	September.....	7.3
May.....	5.5	October.....	27.5
June.....	2.0	November.....	29.7
July.....	1.9	December.....	20.0
August.....	1.3		

It will be observed that 77.2 per cent of the whole volume was moved during the months of October, November and December. As indicative of the pressure at the very close of navigation, it is significant that 20 per cent was shipped in December. The last cargo passed eastward on the 16th of that month. In 1914 the proportion of shipments in the last three months of the year was 42 per cent.

## FREIGHT RATES BY WATER.

It was not deemed expedient to depart from the scheme which had been in use for several years past for the studying of freight rates by water. That scheme limited the enquiry to Canadian wheat, as to which definite and more or less complete information was available. Ship owners have responded quite cheerfully to the enquiries addressed to them from day to day, and in this way a satisfactory record has been established. Every cargo of wheat moved during the season was accounted for in the schedules of the Department.

The facts disclosed by this official inquiry are of considerable value. They show that the season of 1915 developed abnormal freight rates on waterborne wheat. The comparisons which follow will make that clear. The study of the average rates by months will be found to be particularly instructive, as demonstrating the effect of pressure in the face of a limited supply of vessels.

Figures showing the volume of wheat moved over the different routes will be found on preceding pages. We are immediately concerned in an analysis of the freight rates which applied to that volume. For 1915 and the two years preceding the facts are given below:—

	1913.	1914.	1915.
Port Arthur—Fort William to Montreal—			
Per ton per mile.....	.142 cent.	.124 cent.	.132 cent.
Per bushel.....	5.351 "	4.58 "	4.99 "
Per ton.....	\$1.78	\$1.52	\$1.66
Port Arthur—Fort William to Georgian Bay—			
Per ton per mile.....	.148 cent.	.095 cent.	.282 cent.
Per bushel.....	2.279 "	1.46 "	3.54
Per ton.....	76.00 "	48.61 "	\$1.18
Port Arthur—Fort William to other Canadian ports—			
Per ton per mile.....	.104 cent.	.065 cent.	.124 cent.
Per bushel.....	2.436 "	1.48 "	2.84 "
Per ton.....	81.21 "	49.29 "	94.80 "
Port Arthur—Fort William to Buffalo—			
Per ton per mile.....	.103 cent.	.061 cent.	.159 cent.
Per bushel.....	2.430 "	1.63 "	3.97 "
Per ton.....	81.00 "	53.72 "	\$1.32
Port Arthur—Fort William to Kingston—			
Per ton per mile.....		.096 cent	
Per bushel.....		3.08 "	
Per ton.....		\$1.00	
Port Colborne to Montreal—			
Per ton per mile.....			.288 cent.
Per bushel.....			3.25 "
Per ton.....			\$1.08

The advance in 1915, as compared with the two years preceding, applied to all the ports, with the single exception of Montreal. The increase in freight rates will be more clearly understood in the light of data showing the rising

scale after August. The facts for 1915 and the two preceding years are as follows:—

Port Arthur-Fort William to Montreal.	1913.			1914.		
	Per bushel.	Per ton.	Per ton per mile.	Per bushel.	Per ton.	Per ton per mile.
	Cents.	\$	Cents.	Cents.	\$	Cents.
April	6.015	2.04	.165	5.52	1.84	.149
May	5.525	1.84	.135	5.01	1.67	.136
June	4.682	1.54	.127	4.17	1.39	.113
July	4.080	1.60	.130	4.02	1.34	.107
August	5.440	1.68	.137	4.47	1.49	.121
September	5.282	1.76	.144	4.53	1.51	.123
October	6.313	2.10	.171	4.31	1.43	.116
November	6.341	2.11	.172	4.30	1.40	.114
Average	5.351	1.78	.142	4.58	1.52	.124

Port Arthur-Fort William to Montreal.	1915.		
	Per bushel.	Per ton.	Per ton per mile.
	Cents.	\$	Cents.
April	4.88	1.62	.132
May	3.94	1.31	.107
June	3.84	1.28	.104
July	3.58	1.19	.097
August	4.09	1.36	.111
September	5.49	1.83	.149
October	6.75	2.25	.183
November			
December			
Average	4.99	1.66	.132

Port Arthur-Fort William to Georgian Bay.	1913.			1914.		
	Per bushel.	Per ton.	Per ton per mile.	Per bushel.	Per ton.	Per ton per mile.
	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
April	2.42	80.63	.157	1.82	60.72	.118
May	2.16	71.85	.135	1.45	48.66	.095
June	2.18	73.93	.142	1.11	37.02	.070
July	1.59	52.73	.102	.90	30.20	.058
August	1.43	47.81	.092	1.04	35.12	.068
September	1.53	51.26	.100	1.23	41.23	.080
October	2.21	73.95	.146	1.26	42.26	.082
November	2.46	82.30	.160	1.35	45.01	.087
December	3.35	81.12	.220	2.20	73.37	.143
Average	2.28	76.03	.148	1.46	48.61	.095

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			1915.		
Port Arthur-Fort William to Georgian Bay.			Per bushel.	Per ton.	Per ton per mile.
	Cents.	Cents.	Cents.	Cents.	Cents.
April		1.61	53.81	.105	
May		1.24	41.31	.080	
June		1.16	38.69	.075	
July		1.05	35.12	.068	
August		1.18	38.70	.072	
September		1.96	63.83	.124	
October		3.39	81.13	.221	
November		4.48	1.49	.291	
December		4.99	1.66	.353	
Average		3.54	81.18	.282	

Port Arthur-Fort William and other Canadian ports.	1913.			1914.		
	Per bushel.	Per ton.	Per ton per mile.	Per bushel.	Per ton.	Per ton per mile.
	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
April	2.599	86.63	.127	1.75	58.46	.075
May	2.200	73.35	.091	1.60	53.43	.067
June	1.755	58.53	.072	1.41	47.19	.064
July	2.371	90.36	.122	1.35	45.12	.056
August	1.928	64.27	.082	1.05	35.30	.060
September	1.969	65.63	.083	1.34	44.90	.060
October	2.767	92.23	.166	1.40	49.51	.062
November	2.780	92.69	.116	1.52	50.75	.071
December	3.081	81.03	.146	2.24	72.22	.102
Average	2.436	84.25	.104	1.48	49.29	

Port Arthur-Fort William to other Canadian ports	1915.		
	Per bushel.	Per ton.	Per ton per mile.
	Cents.	Cents.	Cents.
April		1.56	.065
May		1.36	.057
June		1.21	.050
July		1.19	.048
August		1.27	.064
September		1.67	.073
October		3.01	.134
November		4.22	.191
December		5.51	.244
Total		2.84	.124

Port Arthur-Fort William to Buffalo.	1913.			1914.		
	Per bushel.	Per ton.	Per ton per mile.	Per bushel.	Per ton.	Per ton per mile.
	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
April	2.739	91.30	.108	2.79	91.94	.105
May	2.442	81.40	.094	1.26	42.21	.048
June	1.954	65.13	.076	1.41	36.10	.041
July	2.289	76.30	.118	.82	27.52	.031
August	1.969	65.63	.090	2.10	70.00	.081
September	1.739	57.97	.066	1.11	37.20	.043
October	2.876	95.86	.122	1.59	53.11	.061
November	2.998	99.97	.114	1.46	49.25	.057
December	3.296	81.09	.126	2.23	74.33	.086
Average.....	2.436	81.25	.104	1.63	53.72	.061

Port Arthur-Fort William to Buffalo.	1915.		
	Per bushel.	Per ton.	Per ton per mile.
	Cents.	Cents.	Cents.
April	1.49	49.63	.057
May.	1.04	34.79	.040
June	1.08	36.20	.041
July	1.24	41.47	.048
August	2.25	75.00	.086
September	2.78	92.70	.107
October	4.04	81.35	.162
November	4.30	1.43	.172
December	4.53	1.51	.181
Average	3.97	81.32	.159

Port Colborne to Montreal.	1915.		
	Per bushel.	Per ton.	Per ton per mile.
	Cents.	Cents.	Cents.
April	2.90	96.79	.256
May.....	2.97	99.24	.263
June	2.90	96.50	.253
July	2.81	90.33	.253
August	2.92	97.47	.258
September	2.98	99.60	.264
October	3.77	81.25	.333
November	4.14	1.38	.366
December	4.00	1.34	.353
Average	3.25	81.08	.287

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The foregoing rates present several problems in transportation. For example, the distance between Fort William and Port Colborne is 337 miles, or 40 per cent, greater than to Port McNichol, on Georgian bay; yet there were times during the year when the rates per bushel to Port Colborne were lower than to Port McNichol. They were much lower for all months on the ton mile basis. It will also be noticed that the average rate to Georgian Bay ports in December was 375 per cent higher than the average for July. As a matter of fact, cargoes were moved over certain routes in December at nearly six times the rate which prevailed in the midsummer months.

There is an aspect of the broad matter of freight rates on wheat which should not be overlooked. The ship owners do not receive all of the freight charges. Out of the rate certain payments have to be made. These payments on cargoes from Fort William to Montreal were officially ascertained to be as follows:—

Clearing house at Fort William.....	.01 to .03 cent per bushel.
Trimmers at Fort William.....	.06 " "
Elevation at Montreal.....	.30 " "
Shovelling at Montreal.....	.20 " "
 Total.....	.59 cent per bushel.

To Port Colborne the average deductions would amount to .44 per bushel, to Buffalo .41, and to Georgian Bay ports .38.

## MOVEMENT OF OTHER GRAIN.

The volume of other Canadian grain moved eastward through the Canadian and American canals at Sault Ste. Marie in 1915 was lower than for the year 1914. A comparison is made in the following statement:—

	1914.	1915.
	Bushels.	Bushels.
Oats	26,240,701	26,798,488
Barley	5,284,350	4,496,509
Flax seed	7,175,977	2,068,582
Total	38,701,028	33,363,579

The decline in flax seed is striking, particularly when it is remembered that in 1914 the shipments amounted to 7,175,977 bushels, and in 1913 to 21,281,723 bushels.

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Since considerable interest attaches to the facts with regard to the distribution of Canadian oats, the following tabular statements for 1914 and 1915 will be helpful:—

Canadian Oats. Canadian and American Canals. 1914.	April.	May.	June.	July.	August.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
Fort William to Montreal.....	1,204,353	1,967,647	1,679,588	418,647	687,353
"    Georgian bay.....	732,294	2,279,118	1,661,882	117,529	174,529
"    other Canadian ports		1,531,058	786,000	45,000	240,000
"    Buffalo	1,643,823	623,118	114,764		1,352
Duluth to Montreal			348,530		
"    Georgian bay			120,000		
"    other Canadian ports			365,588		
"    Buffalo				133,882	
Total.....	3,580,470	6,400,941	5,076,352	715,058	1,103,234
	Sept.	October.	Nov.	December.	Total.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
Fort William to Montreal.....	715,647	1,641,059	544,235	30,000	3,888,529
"    Georgian bay.....	16,706	562,353	1,930,529	832,000	3,306,940
"    other Canadian ports.....	353,000	851,353	532,706	271,000	4,610,117
"    Buffalo.....	3,059	958,589	98,882	23,528	3,467,115
Duluth to Montreal					348,530
"    Georgian bay					120,000
"    other Canadian ports					365,588
"    Buffalo					133,882
Total.....	1,088,412	4,013,354	3,106,352	1,156,528	26,240,701

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Canadian Oats. Canadian and American Canals. 1915.	April.	May.	June.	July.	August.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
Fort William-Port Arthur to Montreal.....	643,348	753,795	342,528	164,000	120,000
"      "      Georgian bay....	..	676,087	168,294	526,865	396,858
"      "      other Canadian ports.....	232,000	1,676,124	388,000	612,000	263,000
"      "      Buffalo			50,000		
Duluth-Superior to Montreal					
"      "      Georgian bay					
"      "      other Canadian ports					
"      "      Buffalo	..	1,750			
<b>Total.....</b>	<b>875,348</b>	<b>3,107,756</b>	<b>948,822</b>	<b>1,302,865</b>	<b>779,858</b>
	Sept.	October.	Nov.	December.	Total.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
Fort William-Port Arthur to Montreal.....	88,176	1,379,985	2,108,033	319,275	5,919,140
"      "      Georgian bay....	167,275	1,169,522	5,788,206	3,244,500	12,137,607
"      "      other Canadian ports.....		611,650	469,118	735,000	4,986,892
"      "      Buffalo.....		292,802	1,802,028	1,559,519	3,704,349
Duluth-Superior to Montreal					
"      "      Georgian bay					
"      "      other Canadian ports					
"      "      Buffalo	45,000	3,750			50,500
<b>Total.....</b>	<b>300,451</b>	<b>3,457,709</b>	<b>10,167,385</b>	<b>5,858,294</b>	<b>26,798,488</b>

## INSURANCE RATES.

Following are the facts with respect to marine insurance rates on the Great Lakes:—

	First Class.	Second Class.
To Lake Erie and Georgian Bay ports—		
April 15, a.m., to April 30, p.m.....	\$ 0 45	\$ 0 60
May 1, a.m., to August 31, p.m.....	0 30	0 40
September 1, a.m., to November 30, midnight.....	0 45	0 65
To Port Huron, Point Edward, Goderich, Sarnia and Detroit—		
April 1, a.m., to April 30, p.m.....	0 40	0 55
May 1, a.m., to August 31, p.m.....	0 25	0 35
September 1, a.m., to November 30, midnight.....	0 40	0 60
To Kingston and Lake Ontario ports, including Ogdensburg and Prescott—		
April 1, a.m., to April 30, p.m.....	0 65	0 75
May 1, a.m., to August 31, p.m.....	0 45	0 55
September 1, a.m., to November 30, midnight.....	0 60	1 00
To Montreal direct without Transhipment—		
April 20, a.m., to October 31, p.m.....	0 60	1 10
November 1, a.m., to November 30, p.m.....	0 70	1 25
To Montreal via Kingston, Prescott and Ogdensburg and Transhipped—		
If transhipped at Kingston, Ogdensburg, or Prescott, and forwarded thence to Montreal, approved standard barges, add 15 cents to Kingston, Ogdensburg and Prescott rate.		
From Lake Superior ports to Lake Michigan ports—		
Charge Lake Erie ports' rates.		
From Lake Michigan ports to Lake Michigan ports—		
Charge 50 per cent of Lake Erie ports' rates.		
From Port Colborne to Montreal—		
Sailing April 15, a.m., to August 31, midnight.....	0 30	0 40
For through rates add the rate to lake Erie to the above. If transhipped again at Kingston, tariff charges apply.		

The foregoing schedules apply to the year 1914. For 1915 the standard rate paid on steel hulls covering to the foot of lake Erie for a period of one year with a navigating season from April 15 at midnight to November 30 at midnight was  $3\frac{3}{4}$  per cent. The usual extra  $\frac{1}{2}$  per cent for the season was charged for navigation not east of Kingston, with a further  $\frac{1}{2}$  per cent for navigation not east of Montreal, while an additional  $\frac{1}{2}$  per cent was charged for navigation as far as Cape Breton. For an additional 1 per cent sailing was permitted in 1915 up to December 12.

# CANADIAN VESSELS.

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## CANAL STATISTICS

Years.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Total Tons.		Number of Trips.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	
1838	1,201,529	1,194,665	162,554	1,071	36,277	1,252	1,295,304	1,245,015	1,395,932	2,847,952	18,991
1839	1,113,290	1,120,774	158,249	34,368	22,553	20,271	189,876	19,371	2,640,322	2,995,582	17,661
1840	1,285,574	1,207,892	188,131	39,371	252,565	296,676	1,494,952	1,494,952	1,139,472	3,139,472	19,393
1841	1,250,999	1,251,127	229,478	351	14,063	16,350	250,565	292	1,558,537	1,580,935	20,655
1842	1,287,168	1,314,127	201,758	351	14,063	16,350	244,176	201,374	1,575,176	1,560,278	19,246
1843	1,356,515	1,356,515	177,136	394	14,659	17,037	248,442	248,442	1,710,510	1,691,455	21,177
1844	1,517,249	1,517,249	170,180	10	14,666	17,394	222,696	222,696	1,736,489	1,697,565	20,757
1845	1,422,326	1,422,326	217,635	5	11,5	6,394	285,553	285,553	1,545,998	1,502,906	19,027
1846	1,260,907	1,260,907	253,693	5	5,889	5,889	271,809	271,809	1,518,440	1,464,619	17,136
1847	1,165,683	1,258,815	1,258,815	5	4,115	4,115	297,998	297,998	1,848,510	1,792,227	20,972
1848	1,420,342	1,547,757	1,547,757	5	3,593	3,593	255,927	255,927	1,927,358	1,840,737	21,466
1849	1,432,951	1,629,192	1,629,192	5	6,805	6,805	345,980	345,980	2,156,896	2,055,107	21,509
1850	215,755	215,755	200,292	5	42,290	42,290	358,781	358,781	1,970,627	1,977,955	23,579
1851	1,432,951	1,704,661	1,704,661	5	33,015	33,015	312,003	312,003	1,984,673	1,984,673	21,755
1852	1,865,643	1,767,293	1,767,293	5	97,332	97,332	286,520	286,520	2,226,963	2,122,832	20,860
1853	1,651,340	1,651,340	263,926	5	101,335	101,335	14,922	14,922	2,558,732	2,597,555	21,755
1854	1,587,221	1,587,221	279,007	5	64	64	2,908	2,908	1,095,591	1,074,143	20,860
1855	1,540,787	1,540,787	241,356	5	32,436	32,436	14,922	14,922	1,984,673	1,984,673	21,755
1856	2,061,258	2,061,258	340,353	5	515	515	1,999	1,999	1,927,358	1,927,358	21,755
1857	1,835,260	1,901,900	1,901,900	5	3,691	3,691	925	925	1,970,627	1,977,955	21,755
1858	2,059,097	2,059,097	262,401	5	3,64	3,64	3,909	3,909	1,984,673	1,984,673	21,755
1859	2,271,776	2,271,776	312,773	5	3,909	3,909	159,740	159,740	1,970,627	1,977,955	21,755
1860	2,031,761	2,031,761	292,705	5	101,335	101,335	188,138	188,138	1,984,673	1,984,673	21,755
1861	2,264,476	2,264,476	312,773	5	1,914,167	1,914,167	1,574	1,574	1,984,673	1,984,673	21,755
1862	2,661,317	2,661,317	337,822	5	1,914,167	1,914,167	1,574	1,574	1,984,673	1,984,673	21,755
1863	2,748,139	318,327	318,327	5	1,914,167	1,914,167	1,574	1,574	1,984,673	1,984,673	21,755
1864	2,992,403	3,335,187	3,335,187	5	1,914,167	1,914,167	1,574	1,574	1,984,673	1,984,673	21,755
1865	3,504,463	3,891,613	3,891,613	5	1,914,167	1,914,167	1,574	1,574	1,984,673	1,984,673	21,755
1866	3,646,516	3,997,073	3,997,073	5	1,914,167	1,914,167	1,574	1,574	1,984,673	1,984,673	21,755
1867	4,168,304	4,457,303	4,457,303	5	1,914,167	1,914,167	1,574	1,574	1,984,673	1,984,673	21,755
1868	4,646,516	4,961,635	4,961,635	5	1,914,167	1,914,167	1,574	1,574	1,984,673	1,984,673	21,755
1869	4,168,304	4,891,369	4,891,369	5	1,914,167	1,914,167	1,574	1,574	1,984,673	1,984,673	21,755
1870	4,646,516	5,009,004	5,009,004	5	1,914,167	1,914,167	1,574	1,574	1,984,673	1,984,673	21,755
1871	4,168,304	4,333,500	4,333,500	5	1,914,167	1,914,167	1,574	1,574	1,984,673	1,984,673	21,755
1872	4,646,516	4,410,105	4,410,105	5	1,914,167	1,914,167	1,574	1,574	1,984,673	1,984,673	21,755
1873	4,971,983	5,265,352	5,265,352	5	1,914,167	1,914,167	1,574	1,574	1,984,673	1,984,673	21,755
1874	5,863,149	6,214,592	6,214,592	5	1,914,167	1,914,167	1,574	1,574	1,984,673	1,984,673	21,755
1875	6,005,050	6,045,806	6,045,806	5	1,914,167	1,914,167	1,574	1,574	1,984,673	1,984,673	21,755
1876	6,045,806	6,116,125	6,116,125	5	1,914,167	1,914,167	1,574	1,574	1,984,673	1,984,673	21,755
1877	6,214,592	6,275,337	6,275,337	5	1,914,167	1,914,167	1,574	1,574	1,984,673	1,984,673	21,755
1878	6,214,592	6,275,337	6,275,337	5	1,914,167	1,914,167	1,574	1,574	1,984,673	1,984,673	21,755
1879	6,214,592	6,275,337	6,275,337	5	1,914,167	1,914,167	1,574	1,574	1,984,673	1,984,673	21,755
1880	6,214,592	6,275,337	6,275,337	5	1,914,167	1,914,167	1,574	1,574	1,984,673	1,984,673	21,755
1881	6,214,592	6,275,337	6,275,337	5	1,914,167	1,914,167	1,574	1,574	1,984,673	1,984,673	21,755
1882	6,214,592	6,275,337	6,275,337	5	1,914,167	1,914,167	1,574	1,574	1,984,673	1,984,673	21,755
1883	6,214,592	6,275,337	6,275,337	5	1,914,167	1,914,167	1,574	1,574	1,984,673	1,984,673	21,755
1884	6,214,592	6,275,337	6,275,337	5	1,914,167	1,914,167	1,574	1,574	1,984,673	1,984,673	21,755
1885	6,214,592	6,275,337	6,275,337	5	1,914,167	1,914,167	1,574	1,574	1,984,673	1,984,673	21,755
1886	6,214,592	6,275,337	6,275,337	5	1,914,167	1,914,167	1,574	1,574	1,984,673	1,984,673	21,755
1887	6,214,592	6,275,337	6,275,337	5	1,914,167	1,914,167	1,574	1,574	1,984,673	1,9	

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## GENERAL STATISTICS.

The following tables of general statistics will afford further information with regard to the canals of Canada:

## STATEMENT of Total Freight passed through the Canals for the following years.

Years.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Total Tons.	Up and Down.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
1887...	1,151,121	138,692	292,563	151,805	457,482	713,519	2,006,997	2,720,516		
1888...	1,146,260	138,127	214,407	223,429	428,357	789,310	1,972,287	2,761,397		
1889...	1,156,306	122,205	198,497	267,221	555,529	2,258,367	3,113,896	3,113,896		
1890...	1,137,011	144,368	133,188	216,813	603,311	533,021	789,505	2,913,017		
1891...	1,155,347	103,811	123,193	248,188	58,709	50,747	542,259	772,809	2,123,512	
1892...	1,322,137	173,565	135,787	241,034	327,560	302,984	45,396	481,301	781,528	
1893...	1,344,822	214,076	217,329	885,769	351,706	41,912	568,806	806,773	806,023	
1894...	1,140,606	201,175	89,614	231,172	299,155	286,191	16,020	568,806	780,522	
1895...	1,070,016	91,177	362,667	62,285	261,821	296,353	608,778	590,140	975,937	
1896...	1,619,668	259,659	100,519	1,197,245	3,336,054	117,515	1,175,515	867,010	1,867,792	
1897...	1,713,274	268,700	187,960	4,369,314	275,587	108,787	965,203	1,322,216	7,288,751	
1898...	1,819,887	187,253	98,967	2,425,121	263,989	829,508	81,615	912,135	1,362,365	
1899...	1,833,112	266,364	115,136	732,030	296,208	125,678	727,111	1,420,280	4,805,644	
1900...	1,682,915	270,035	81,714	1,339,915	312,201	568,197	105,155	702,563	1,255,586	
1901...	1,686,094	268,419	201,231	507,204	340,805	268,484	201,231	682,065	1,294,173	
1902...	2,064,480	308,212	342,484	515,828	529,085	308,212	308,500	562,229	1,513,368	
1903...	2,391,566	430,171	408,500	863,357	648,150	373,156	373,156	958,018	2,315,117	
1904...	2,047,499	511,557	276,578	699,784	606,737	3,130,816	3,130,816	851,053	5,054,033	
1905...	2,252,511	519,365	347,089	607,228	736,976	3,292,422	3,183,895	577,528	1,137,116	
1906...	2,355,655	627,091	234,919	1,023,829	1,238,929	3,504,849	1,060,715	991,508	2,451,097	
1907...	3,162,155	801,692	226,135	1,991,959	1,064,733	3,501,849	1,060,715	11,060,878	6,920,647	
1908...	3,292,422	560,736	278,721	1,704,310	1,028,246	5,291,422	1,060,715	991,508	4,265,592	
1909...	3,501,849	1,060,715	607,894	1,985,522	1,608,659	3,501,849	1,060,715	1,023,829	1,544,051	
1910...	3,861,272	600,114	661,436	3,323,822	2,312,740	3,861,272	2,312,740	995,749	7,232,455	
1911...	3,910,558	572,470	995,719	2,086,777	2,370,516	3,910,558	2,370,516	995,719	7,576,440	
1912...	4,973,342	867,250	1,060,838	2,340,441	2,340,441	4,973,342	2,340,441	961,838	6,594,801	
1913...	6,286,637	967,712	1,178,263	2,212,928	2,212,928	6,286,637	2,212,928	1,006,917	7,782,114	
1914...	6,381,242	1,474,121	1,474,121	6,381,242	999,256	618,275	6,381,242	1,474,121	5,229,286	
1915...	4,300,658	1,073,011	1,073,011	4,300,658	988,860	643,351	4,300,658	1,073,011	2,861,558	
									12,387,215	
									15,198,503	

Sault Ste. Marie canal opened in August, 1895.

STATEMENT of the Tonnage of Canadian and United States Vessels.

UNITED STATES VESSELS.

Years.	From Canadian to Canadian Ports.		From United States to United States Ports.		From United States to (Canadian Ports.		Tons.	Total Tons.	Number of Trips.
	Up.	Down	Up.	Down	Up.	Down			
1887 ..	16,265	38,857	56,708	143,730	140,562	52,793	251,645	566,680	3,583
1888 ..	14,304	42,425	50,047	177,714	156,095	49,778	284,221	631,777	3,921
1889 ..	21,125	55,996	50,732	253,088	206,567	56,249	386,458	830,645	4,542
1890 ..	16,390	35,156	36,397	248,418	234,728	39,697	336,661	721,397	3,364
1891 ..	10,357	29,851	70,665	27,727	283,013	238,818	116,602	395,118	442,998
1892 ..	12,023	29,405	88,221	22,763	280,315	229,437	117,596	454,199	571,795
1893 ..	10,752	34,303	214,047	33,741	351,994	282,724	50,994	307,787	658,508
1894 ..	18,528	30,201	139,720	20,830	302,562	269,788	37,406	192,992	498,216
1895 ..	8,838	24,768	139,554	17,712	262,240	216,542	32,295	185,730	441,927
1896 ..	11,496	19,093	195,228	21,953	357,205	292,359	40,416	290,370	604,345
1897 ..	14,666	18,367	269,430	17,618	338,953	277,345	26,341	347,698	649,375
1898 ..	12,142	9,541	133,524	32,880	308,875	305,464	32,331	336,004	586,875
1899 ..	17,217	18,044	172,897	30,002	1,605,887	1,156,503	51,902	234,336	1,846,848
1900 ..	13,316	17,824	157,689	30,443	1,208,725	744,276	45,741	190,971	1,425,471
1901 ..	11,587	18,706	177,169	28,124	922,464	1,044,707	54,895	224,622	1,316,159
1902 ..	13,622	37,871	187,826	70,641	1,756,948	1,654,672	123,257	241,602	2,004,786
1903 ..	14,014	24,168	265,208	65,247	1,736,187	1,689,414	106,401	335,836	2,121,810
1904 ..	10,122	16,890	275,721	39,993	1,464,316	1,475,085	68,081	305,697	1,818,240
1905 ..	19,743	19,444	364,985	81,876	2,350,494	1,701,704	1,101,536	456,459	2,259,758
1906 ..	34,306	15,324	356,259	78,561	2,738,623	1,928,131	115,675	418,436	3,244,863
1907 ..	57,349	72,018	304,591	72,048	4,730,053	5,376,060	205,760	623,941	5,462,767
1908 ..	54,587	32,705	442,773	124,120	2,975,624	4,142,392	218,835	536,103	4,835,320
1909 ..	263,592	109,407	442,176	200,202	4,178,378	10,429,614	213,750	621,903	5,098,196
1910 ..	119,222	50,498	429,702	305,330	5,509,417	14,485,565	299,462	576,101	6,356,803
1911 ..	49,778	12,643	626,897	124,057	2,975,624	4,142,392	218,835	536,103	4,835,320
1912 ..	50,296	15,518	763,426	109,407	4,178,378	10,429,614	213,750	621,903	5,098,196
1913 ..	61,301	29,788	673,382	711,603	5,657,984	15,567,499	703,212	834,019	7,095,879
1914 ..	39,246	31,535	563,517	373,829	3,292,736	10,259,835	268,800	806,916	4,164,299
1915 ..	49,138	30,310	672,694	306,502	2,934,455	2,419,998	171,696	800,408	3,557,218

CANAL STATISTICS

SESSIONAL PAPER No. 20a

## Vessel and Freight Tonnage passed through the Sault Ste. Marie Canal.

Year	Canadian Vessel	No.	Tonnage	Freight Tonnage		United States	Total	Vessel No.	Tonnage	Freight Tonnage		Remarks	Days (Open)		
				Canadian	U. S.					Canadian	U. S.				
1895	126,534	583	623,092	1,192	749,626	595,857	3,042	1895	589,407	3,066	3,805,749	5,136	4,395,156	218	
1896	2,070	3,805,749	5,136	4,395,156	4,577,399	2,604	2,604	1896	405,546	2,359	3,391,936	4,268	3,797,482	218	
1897	1,909	403,931	1,864	2,353,699	3,675	2,737,630	3,055,387	1897	558,552	1,769	2,389,457	3,769	2,948,069	213	
1898	1,811	558,552	1,769	2,389,457	3,769	2,948,069	3,006,664	1898	577,310	1,291	1,617,138	2,081	2,194,748	239	
1899	2,000	577,310	1,291	1,617,138	2,081	2,194,748	2,035,677	1899	775,151	1,408	1,674,597	4,204	2,419,748	238	
1900	1,790	775,151	1,408	1,674,597	4,204	2,419,748	2,820,394	1900	3,050	1,366,930	1,964	3,237,372	5,014	4,604,302	246
1901	2,796	3,050	1,366,930	1,964	3,237,372	5,014	4,604,302	1901	2,711	1,615,939	1,640	3,146,897	4,351	4,762,746	264
1902	2,711	2,711	1,615,939	1,640	3,146,897	4,351	4,762,746	1902	637	1,555,012	1,325	2,675,663	3,902	4,230,705	256
1903	2,717	637	1,555,012	1,325	2,675,663	3,902	4,230,705	1903	970	1,803,249	1,692	2,734,349	5,662	5,537,637	241
1904	2,717	970	1,803,249	1,692	2,734,349	5,662	5,537,637	1904	922	1,959,252	1,758	4,399,872	5,680	6,359,124	255
1905	2,717	922	1,959,252	1,758	4,399,872	5,680	6,359,124	1905	2,217	2,154,688	3,132	9,961,281	6,349	12,115,969	254
1906	2,717	2,217	2,154,688	3,132	9,961,281	6,349	12,115,969	1906	2,289	2,603,292	2,204	7,035,655	5,293	9,638,587	235
1907	2,717	2,289	2,603,292	2,204	7,035,655	5,293	9,638,587	1907	2,507	2,958,936	3,734	14,850,738	6,341	17,839,674	240
1908	2,717	2,507	2,958,936	3,734	14,850,738	6,341	17,839,674	1908	744	3,173,494	5,228	20,187,704	7,972	23,361,198	248
1909	2,717	744	3,173,494	5,228	20,187,704	7,972	23,361,198	1909	713	3,108,880	4,068	16,252,940	6,781	19,361,220	236
1910	2,717	713	3,108,880	4,068	16,252,940	6,781	19,361,220	1910	643	3,296,229	5,213	22,536,015	7,856	25,832,244	240
1911	2,717	643	3,296,229	5,213	22,536,015	7,856	25,832,244	1911	279	3,793,434	5,096	22,181,007	8,285	25,974,441	216
1912	2,717	279	3,793,434	5,096	22,181,007	8,285	25,974,441	1912	1,011	3,473,292	2,966	13,827,870	5,977	17,301,162	239
1913	2,717	1,011	3,473,292	2,966	13,827,870	5,977	17,301,162	1913	3,000	3,041,003	1,231	5,446,812	4,331	8,484,815	245
1914	2,717	3,000	3,041,003	1,231	5,446,812	4,331	8,484,815	1914	561	734	5,189,221	7,750,957	7,750,957	245	

87 Canal first operated Sept. 9 1895

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## CAPITAL EXPENDITURE.

The following statement brings the capital expenditure on the canals of the Dominion down to March 31, 1915. It must be understood, however, that the total shown is apart from the outlay by the Imperial Government on the Carillon and Grenville canal, as to which the records were lost in the destruction by fire of the Ordnance Office, Montreal, in 1852. The details are as follows:—

Canal.	Capital.		
	Construction.	Enlargement.	Total.
			\$ cts.
Beauharnois.....	1,636,690 26		1,636,690 26
Carillon and Grenville.....	63,053 64	4,119,039 32	4,182,092 96
Chambly.....	637,056 76	94,639 76	731,696 52
Cornwall.....	1,945,624 73	5,300,679 48	7,246,304 21
Culbute.....	382,391 46		382,391 46
Lachine.....	2,589,532 85	11,387,717 10	13,977,249 95
Lake St. Francis.....		75,906 71	75,906 71
Lake St. Louis.....		298,176 11	298,176 11
Murray.....	1,248,946 71		1,248,946 71
Rideau.....	4,084,323 37	83,130 84	4,167,454 21
Sault Ste. Marie.....	4,994,372 51		4,944,372 51
Soulange.....	7,870,284 74		7,870,284 74
Ste. Anne's.....	134,456 51	1,035,759 12	1,170,215 63
Fleuve St. Lawrence and canals.....	18,442 85	3,451,470 56	3,469,913 41
St. Ours.....	121,537 65	5,690 91	127,228 56
St. Peter's:.....	648,547 14		648,547 14
Tay.....	489,599 23		489,599 23
Trent.....	14,612,735 30		14,612,735 30
Welland.....	7,693,824 03	21,854,424 09	29,548,248 12
Welland Ship Canal	5,068,458 29		5,068,458 29
{Farran's Point.....		877,090 57	
Williamsburg {Galops.....		6,121,213 70	
{Rapide Plat.....		2,158,242 00	
Williamsburg.....	1,320,655 54	13,896 26	10,491,098 07
St. Andrew's Lock.....	1,533,750 57		1,533,750 57
Total ... .....	57,094,284 14	56,877,076 53	113,971,360 67

The cost of maintenance for the fiscal year 1915 was \$1,644,176.26.

I have the honour to be, sir,

Your obedient servant,

J. L. PAYNE,

*Comptroller of Statistics.*



## CANAL STATISTICS

FOR

## SEASON OF NAVIGATION, 1915.

## GRAIN PASSED DOWN WELLAND.

The quantity of barley, corn, oats, peas, rye, and wheat passed down the Welland canal, from ports west of Port Colborne for a period of thirty-four years is as follows:—

Quantity passed down to Montreal.	Tons.	To ports in Ontario.	Quantity
			from U.S. Ports to U.S. Ports
1882	180,694		63,881
1883	186,814	10,650	121,876
1884	142,194	12,153	104,537
1885	96,569	11,909	117,346
1886	203,940	9,881	151,551
1887	185,034	11,838	134,868
1888	160,358	25,599	169,664
1889	267,769	19,075	213,766
1890	288,513	15,899	245,932
1891	295,509	6,805	202,710
1892	261,954	8,942	201,540
1893	501,806	25,555	222,958
1894	273,651	16,699	203,979
1895	231,491	32,096	133,823
1896	461,049	73,386	160,372
1897	*560,254	53,257	157,756
1898	519,532	31,279	144,612
1899	332,746	40,197	68,011
1900	244,661	17,525	84,589
1901	151,566	13,732	83,370
1902	208,215	22,787	81,164
1903	251,936	29,062	111,828
1904	198,246	23,711	102,523
1905	341,431	42,061	129,270
1906	304,935	33,351	176,119
1907	635,573	42,032	163,295
1908	756,141	38,142	135,172
1909	652,742	40,238	129,587
1910	789,661	63,657	115,457
1911	836,924	51,560	121,655
1912	961,855	47,866	177,195
1913	1,265,368	63,806	122,069
1914	1,836,456	90,910	70,186
1915	1,120,027	33,200	109,810

During the last decade the quantity of agricultural products, as above passed down the Welland and St. Lawrence canals to Montreal has increased

6 GEORGE V, A. 1916

from 304,935 tons in 1906 to 1,120,027 in 1915, and the quantity passed down the Welland canal from United States ports to United States has decreased from 176,119 to 109,810 tons the same years.

The quantity of barley, buckwheat, corn, oats, peas, rye, and wheat, arrived at Montreal via Grand Trunk and Canadian Pacific railways for a period of 15 years, is reported as follows:—

Year.	Tons.
1901.	227,700
1902	263,561
1903.	253,959
1904	154,625
1905.	148,377
1906.	386,963
1907.	383,735
1908	285,262
1909.	426,163
1910	280,705
1911.	241,134
1912	462,444
1913	268,388
1914	639,969
1915	758,043

The quantity of the same articles passed down the whole length of the St. Lawrence canals to Montreal for the same period was:—

Year.	Tons.
1901.....	233,316
1902.....	242,225
1903.....	400,057
1904.....	229,076
1905.....	375,630
1906.....	449,673
1907.....	684,697
1908.....	776,374
1909.....	652,742
1910.....	789,661
1911.....	836,924
1912.....	964,187
1913.....	1,265,376
1914.....	1,836,456
1915.....	1,120,027

Comparative shipments of grain by the St. Lawrence route, and railways are as follows:—

#### QUANTITY OF GRAIN TO SEABOARD BY COMPETING ROUTES.

The quantity of grain and peas passed down the whole length of the St. Lawrence canals to Montreal is as follows:—

	Tons.
For 1914.....	1,836,456
1915.....	1,120,027
Showing a decrease of.....	716,429

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The quantity of grain and peas carried to Montreal via Canadian Pacific and Grand Trunk railways is reported as follows:—

	Tons
For 1914.....	689,969
1915.....	558,043
Showing a decrease of.....	131,926

The quantity of grain passed down the Welland canal in Canadian and United States vessels to Kingston and Prescott for fifteen years is as follows:—

In Canadian vessels there were,

	Tons.
1901, 112 cargoes, with an aggregate quantity of:	132,558
1902, 131      "	175,514
1903, 170      "	218,840
1904, 115      "	174,121
1905, 167      "	239,418
1906, 205      "	344,605
1907, 255      "	427,813
1908, 355      "	598,941
1909, 308      "	550,276
1910, 383      "	679,358
1911, 421      "	728,223
1912, 504      "	796,858
1913, 687      "	1,128,324
1914, 911      "	1,004,236
1915, 693      "	992,252

In United States vessels there were,

	Tons.
1901, 135 cargoes, with an aggregate quantity of:	123,229
1902, 135      "	136,652
1903, 219      "	273,986
1904, 118      "	150,359
1905, 235      "	273,344
1906, 178      "	269,800
1907, 263      "	413,087
1908, 271      "	330,514
1909, 174      "	272,291
1910, 182      "	295,714
1911, 173      "	281,916
1912, 154      "	330,058
1913, 253      "	322,919
1914, 178      "	219,462
1915, 157      "	270,785

One hundred and sixty-two Canadian and 49 American vessels took cargoes of 343,733 tons through to Montreal intact in 1908; 87 Canadian and 9 American of 135,582 in 1907; 74 Canadian and 10 American of 108,734 tons in 1906; 95 Canadian and 18 American of 180,206 in 1905; 56 Canadian and 16 American of 116,095 tons in 1904; 56 Canadian and 18 American of 99,582 tons in 1903; 19 Canadian and 17 American of 34,804 tons in 1902; 23 Canadian and 2 American of 17,303 tons in 1901, 15 of 7,924 tons in 1900, 2 of 558 tons in 1899, 7 of 2,426 in 1898, 7 of 2,324 in 1897, 3 of 1,176 in 1896, 4 of 1,344 tons in 1905, 2 cargoes of 810 tons in 1894, none in 1893, 2 in 1892 of 934 tons, and 3 in 1891 of

6 GEORGE V, A. 1916

1,441 tons. Three vessels lightened a portion of their cargoes in 1901, 9 in 1900, 11 in 1899, 25 in 1898, 11 in 1897, 16 in 1896, 6 in 1895, 19 in 1894, 34 in 1893, 25 in 1892, and 44 in 1891; 222 vessels discharged the whole of their cargoes at Kingston in 1901, 540 in 1900, 316 in 1899, 473 in 1898, 359 in 1897, 335 in 1896, 169 in 1895, 188 in 1894, 369 in 1893, 220 in 1892, and 293 in 1891.

The quantity of grain transhipped at Port Colborne in 1909 and the four previous years was as follows:—

Articles.	1905.	1906.	1907.	1908.	1909.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
Wheat.	679,840	1,009,474	1,428,300	1,106,244	2,686,963
Corn.	104,027	110,629	112,036	...	...
Rye.					
Oats.		29,118	30,824	23,945	...
Barley.		2,103		56,544	22,216
Flaxseed.			30,040	49,628	8,202

#### WELLAND CANAL.

The total quantity of freight passed on the Welland canal during the season of 1915 was 3,061,012 tons; of this quantity 219,953 tons was way or local freight.

There were 2,304,552 tons of freight passed eastward, and 756,460 passed westward.

#### *East- and Westbound Through Freight.*

The total quantity of through freight passed through the whole length of the Welland canal during the season of 1915 was 2,841,059 tons.

Of this quantity 2,155,304 tons were eastbound and 685,755 westbound freight.

Of the eastbound through freight, Canadian vessels carried 1,656,390 tons and United States vessels carried 498,914 tons; and of the westbound through freight, Canadian vessels carried 259,625 tons and United States vessels carried 426,130 tons, or a total of 1,916,015 tons for Canadian, and 925,044 tons for American vessels.

#### ST. LAWRENCE CANALS.

The total quantity of freight passed through these canals during 1915 was 3,409,467 tons; of this quantity, 2,584,930 tons passed eastward and 824,537 passed westward.

#### *East- and Westbound Through Freight.*

The total quantity of through freight was 2,865,062 tons; of this quantity 2,297,261 tons were eastbound and 567,801 tons were westbound.

#### *Way Freight.*

Of the total quantity of (way) or local freight, 287,669 tons were eastbound and 256,736 tons westbound freight.

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## THROUGH TRAFFIC BETWEEN MONTREAL AND PORTS ON LAKE ERIE, MICHIGAN, ETC.

The total quantity of through freight passed eastward from Lake Erie and westward from Montreal through the Welland and St. Lawrence canals, during fifteen years, was as follows:—

Year.	Eastward to Montreal.	Westward from Montreal.
1901.	184,420	13,714
1902.	250,475	25,289
1903.	390,786	100,699
1904.	278,328	71,512
1905.	448,704	72,482
1906.	554,231	96,791
1907.	789,167	1,281
1908.	864,926	3,472
1909.	925,005	191,510
1910.	1,170,139	172,360
1911.	1,293,638	233,335
1912.	1,559,963	236,979
1913.	1,710,219	333,592
1914.	2,052,900	360,645
1915	1,813,998	289,215

## THROUGH FREIGHT FROM UNITED STATES PORTS TO UNITED STATES PORTS.

The total quantity of through freight passed eastward and westward through the Welland canal, from United States ports to United States ports, for a period of fifteen years, was as follows:—

Year.	Eastward.		Total.
	Tons	Tons	
1901.	190,476	83,543	274,019
1902.	224,110	44,919	269,029
1903.	221,074	149,151	370,225
1904.	165,337	87,144	252,481
1905.	190,547	112,549	303,096
1906.	237,226	84,205	321,431
1907.	218,997	177,660	396,657
1908.	209,518	239,136	448,654
1909.	196,838	248,581	445,419
1910.	197,301	288,198	485,499
1911.	175,752	309,603	485,355
1912.	180,319	235,437	415,756
1913.	204,597	320,736	525,333
1914.	170,624	338,455	509,079
1915.	156,167	329,449	485,616

The total quantity of freight passed through the Welland canal from United States ports to United States ports shows a decrease of 23,463 tons, as compared with the previous year; and an increase of 211,597 tons as compared with 1901.

The following statement shows the aggregate number of vessels and the total quantity of freight passed through the Welland canal, and the quantity passed between United States ports during the year 1867 to 1915, inclusive:—

Fiscal Year.	Aggregate Number of Trips.	Total quantity transported on the Welland Canal.	Quantity passed from United States ports to United States ports.	
			Number.	Tons.
1867.	5,405	933,260	458,386	
1868.	6,157	1,161,821	641,711	
1869.	6,069	1,231,903	688,700	
1870.	7,356	1,311,956	747,567	
1871.	7,729	1,478,122	772,756	
<i>Season of Navigation.</i>				
1872.	6,063	1,333,104	606,627	
1873.	6,425	1,506,484	656,208	
1874.	5,814	1,389,173	748,557	
1875.	4,242	1,038,050	477,809	
1876.	4,789	1,099,810	488,815	
1877.	5,129	1,175,398	493,841	
1878.	4,429	968,758	373,738	
1879.	3,960	865,664	284,043	
1880.	4,104	819,934	179,605	
1881.	3,332	686,506	194,173	
1882.	3,334	790,643	282,806	
1883.	3,267	1,005,156	432,611	
1884.	3,138	837,811	407,079	
1885.	2,738	784,928	384,509	
1886.	3,589	980,135	464,478	
1887.	2,785	777,918	340,501	
1888.	2,647	878,800	434,753	
1889.	2,975	1,085,273	563,584	
1890.	2,883	1,016,165	233,957	
1891.	2,594	975,013	553,800	
1892.	2,615	955,554	541,065	
1893.	2,843	1,294,823	631,667	
1894.	2,412	1,008,221	592,267	
1895.	2,222	869,595	469,779	
1896.	2,766	1,279,987	653,213	
1897.	2,725	1,274,292	564,694	
1898.	2,384	1,140,077	487,539	
1899.	2,202	789,770	360,529	
1900.	2,399	719,360	318,529	
1901.	1,547	620,209	274,019	
1902.	1,568	665,387	269,029	
1903.	1,787	1,002,919	370,225	
1904.	1,433	811,371	252,481	
1905.	1,595	1,092,050	305,096	
1906.	1,536	1,201,967	321,431	
1907.	1,982	1,614,132	396,743	
1908.	2,351	1,703,453	448,654	
1909.	2,433	2,025,951	445,419	
1910.	2,544	2,326,290	487,499	
1911.	2,480	2,537,629	485,355	
1912.	2,905	2,851,915	415,756	
1913.	3,229	3,570,714	525,333	
1914.	3,692	3,860,969	509,079	
1915.	2,922	3,061,012	485,616	

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The total quantity of freight passed through the several divisions of the Canadian canal system during the season of 1915 is as follows:—

—	Farm Stock.	Forest Produce of Wood.	Manufactures.	Products of Mines.	Agricultural Products.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Sault Ste. Marie.....	655	89,218	441,293	4,564,002	2,655,789	7,750,957
Welland.....	1	308,660	320,442	1,125,106	1,306,803	3,061,012
St. Lawrence.....	4,685	601,255	276,713	1,322,291	1,204,523	3,409,467
Chambly.....	784	280,117	21,605	169,038	7,163	478,707
St. Peter's.....	10	179	322	2,003	381	2,895
Murray.....	271		6,523	23,781	153	30,728
Ottawa.....	2,889	155,669	16,089	93,521	4,202	272,370
Rideau.....	1,690	10,211	10,186	97,173	1,521	120,781
Trent.....	299	44,575	2,751	289	1,990	49,904
St. Andrews.....	5	4,894	187	16,896		21,982

The total quantity of freight moved on the Welland canal was 3,061,012 tons, of which 1,306,803 tons were agricultural products.

On the St. Lawrence canals the total quantity of freight moved was 3,409,467 tons, of which 1,204,523 were agricultural products, and 276,713 tons were manufactures.

On the Ottawa canals the total quantity of freight moved was 272,370 tons; of this quantity, 155,669 tons were the produce of the forest.

The United States canal was open to navigation during the season of—

1889	.....	234 days.	1902	.....	.....	256 days.
1890	.....	228 "	1903	.....	.....	249 "
1891	.....	225 "	1904	.....	.....	223 "
1892	.....	233 "	1905	.....	.....	245 "
1893	.....	219 "	1906	.....	.....	249 "
1894	.....	234 "	1907	.....	.....	233 "
1895	.....	231 "	1908	.....	.....	231 "
1896	.....	232 "	1909	.....	.....	236 "
1897	.....	234 "	1910	.....	.....	224 "
1898	.....	241 "	1911	.....	.....	237 "
1899	.....	231 "	1912	.....	.....	237 "
1900	.....	238 "	1913	.....	.....	245 "
1901	.....	230 "	1914	.....	.....	242 "
			1915	.....	.....	248 "

The Canadian canal was open to navigation during the season of—

1895	.....	87 days.	1905	.....	.....	255 days.
1896	.....	218 "	1906	.....	.....	253 "
1897	.....	238 "	1907	.....	.....	238 "
1898	.....	243 "	1908	.....	.....	235 "
1899	.....	239 "	1909	.....	.....	240 "
1900	.....	238 "	1910	.....	.....	248 "
1901	.....	246 "	1911	.....	.....	236 "
1902	.....	264 "	1912	.....	.....	240 "
1903	.....	256 "	1913	.....	.....	246 "
1904	.....	241 "	1914	.....	.....	239 "
			1915	.....	.....	248 "

The average number of vessels passing per day through the two canals for the season 1915 was 86.

COMPARATIVE STATEMENT of the Commerce through the United States St. Mary's Falls canals and the Canadian Sault Ste. Marie canal, for the Seasons of 1914 and 1915.

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CANAL STATISTICS

Traffic for 1915.		Total Traffic for		Increase.	Decrease.
United States Canal.	Canadian Canal.	Season of 1915.	Season of 1914.	Amount.	Amount.
Vessels.					
Lockages	16,910	4,374	18,616	2,663	
Tonnage, registered	10,312	3,496	13,808	306	
Tonnage, freight	47,918	8,484	56,403	14,412	119
Passengers	63,548	993	7,750	55,370	651
Coal, hard				15,929	299
Coal, soft					9,993
Flour.					221,904
Wheat					900,559
Grain, including wheat					
Manufactured and pig iron					
Salt.					
Copper					
Iron ore					
Lumber					
Silver ore					
Building stone					
Unclassified freight					
	1,175,677	385,346	1,561,023	1,259,386	301,637

C.—TABLE showing the Tonnage of the undermentioned Articles passed through the Welland canal in transit between Ports in the United States during a series of forty-five years, ended December 31, 1915.

Years.	Vegetable Food.						Heavy Goods.								
	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Total.	Railway Iron.	Other Iron.	Sugar and Salt.	Cou.	Ores.	Total.		
1869.	20,681	211,085	91,149	2,942	7,400	667	1,006	337,530	68,064	14,331	28,566	35,912	235,962		
1872.	10,482	124,695	89,761	1,391	1,185	3	608	234,337	24,040	13,239	49,843	95,741	224,264		
1873.	10,805	127,727	101,329	1,920	5,948	500	392	243,366	4,659	13,826	40,507	170,242	62,942	292,176	
1874.	8,230	229,053	125,627	2,641	2,946	525	5,368	374,226	5,742	8,941	22,888	203,673	19,651	260,895	
1875.	1,881	113,832	54,188	1,905	1,905	1,905	1,920	177,908	14	4,123	12,931	192,767	34,616	244,451	
1876.	5,187	96,247	58,138	65,260	1,603	2,314	525	403	162,405	413	5,531	29,395	167,110	25,808	227,844
1877.	3,342	107,396	65,542	60,026	859	277	258	180,586	8,976	8,688	8,336	172,868	41,107	239,975	
1878.	1,316	53,791	33,401	16,122	1,551	464	341	128,361	10,713	3,892	150,583	13,535	178,723		
1879.	159	30,611	30,031	537	296	...	11	87,826	2,405	3,648	6,318	118,573	17,797	148,741	
1880.	...	34,320	32,433	537	537	684	8,579	132,496	4,743	3,515	371	65,945	18,380	92,954	
1881.	...	30,227	66,128	924	924	...	10	65,285	1,313	5,570	83,858	6,464	97,205		
1882.	...	2,041	54,382	53,235	735	9,874	14	64,002	4,076	158,552	14,533	6,901	177,161		
1883.	...	1,715	40,956	53,707	732	882	8,170	114,422	698	1,209	8	196,462	24,891	229,471	
1884.	...	124	53,235	63,229	735	4,799	13	201	172,888	156	1,594	1,594	210,790	15,100	227,187
1885.	...	7,591	53,258	94,048	83,431	1,732	12,050	10,859	157,530	15	5,328	1	198,416	15,029	215,039
1886.	...	11,780	37,678	1,551	1,551	...	...	10,859	118,203	1,209	6,901	8	189,964	11,364	206,813
1887.	...	8,563	39,999	102,974	2	26,510	179	11,598	189,825	63	1,601	56	173,259	177,288	
1888.	...	5,017	39,229	147,045	27,492	...	...	17,225	236,208	...	1,587	896	227,476	1,204	231,163
1889.	...	9,204	31,527	180,842	6,519	27,030	...	20,437	275,619	...	504	208	162,231	1,620	164,563
1890.	...	6,802	32,097	127,494	8,113	52,823	...	26,115	253,444	...	292	705	186,572	1,773	189,342
1891.	...	11,018	26,950	131,222	6,433	36,935	...	31,992	244,550	...	576	2	183,895	...	184,473
1892.	...	6,588	28,187	198,777	16,751	23,870	864	36,352	311,389	...	344	...	206,827	...	207,171
1893.	...	17,795	53,846	105,329	28,095	27,621	...	60,462	198,358	...	297	...	188,521	...	188,818
1894.	...	10,169	27,881	100,512	7,904	17,020	...	46,316	209,802	181	246	...	149,490	...	149,917
1895.	...	16,224	34,878	175,094	11,128	16,137	490	46,456	300,407	...	146	...	207,348	...	207,494
1896.	...	7,237	28,919	169,057	14,173	14,969	...	41,887	276,242	965	15	1,646	770	339	166,123
1897.	...	4,212	11,268	150,667	6,909	12,732	1,197	22,671	209,656	...	1,646	553	1,646	4	157,927
1898.	...	6,118	12,926	81,777	2,424	19,526	923	18,198	141,892	351	1,953	80	88,931	...	91,481
1899.	...	7,966	18,771	60,545	2,402	39,706	2,149	14,248	145,787	...	46,077	...	46,077	...	46,077
1900.	...	7,165	23,557	55,531	7,119	26,344	14,016	143,732	83	12,911	12,911	214	12,911	12,911	13,125
1901.	...	13,785	32,639	66,111	7,418	10,006	...	...	...	...	...	...	...	...	...

\*Apples, meal of all kinds, pens, potatoes.

## CANAL STATISTICS

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C.—TABLE showing the Tonnage of the undermentioned Articles passed through the Welland canal in transit between Ports in the United States during a series of forty-five years, ended December 31, 1915—(concluded).

Years.	Vegetable Food.						Heavy Goods.					
	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	*Other	Total Articles.	Railway Iron.	Other Iron.	Sugar and Salt.	Total.
1903...	6,082	15,439	108,917	11,433	6,112	4,175	13,568	165,725	459	113,072	...	113,535
1904...	8,556	14,269	60,964	16,621	16,497	13,079	129,986	...	...	63,882	...	63,882
1905...	24,054	15,483	93,622	9,197	10,892	...	9,682	162,930	...	73,464	...	73,465
1906...	15,215	13,410	135,410	9,266	11,323	...	10,678	195,132	...	33,523	...	33,692
1907...	18,898	21,892	124,474	2,812	4,741	2	22,001	194,820	...	110,347	4,050	114,420
1908...	17,694	24,651	99,830	7,418	2,070	2	21,393	172,788	...	158,351	1,400	159,751
1909...	15,452	17,940	100,967	4,224	...	...	22,683	161,266	5	131,131	1,531	132,667
1910...	11,859	10,717	126,938	3,840	...	...	8,751	161,925	...	201,893	...	201,893
1911...	2,852	4,950	116,705	...	...	...	7,565	132,072	...	223,942	4,483	256,491
1912...	9,878	15,911	91,254	2,160	1,400	...	12,714	133,317	...	11,078	166,419	4,979
1913...	11,967	20,258	114,662	...	7,407	...	8,685	162,979	...	237,230	5,202	182,776
1914...	8,580	32,657	85,700	5,210	...	10,278	142,425	...	25,258	236,976	6,341	261,324
1915...	4,124	22,310	89,269	690	457	5,152	122,022	...	15,705	235,929	17,972	268,575
												269,606

\*Apples, meal all kinds, pease, potatoes.

A.--TABLE showing the total tonnage of the undermentioned articles moved Up  
December

## Vegetable Food.

Year.	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Articles. †
1869	45,674	313,825	120,599	20,951	...	904	1,937
1872	26,651	239,998	254,902	6,035	7,752	64	2,745
1873	30,665	355,847	180,169	8,225	1,194	3	3,777
1874	24,019	413,212	181,151	18,871	5,954	513	8,677
1875	13,964	253,835	103,749	35,751	3,383	917	6,337
1876	15,778	201,906	144,501	18,455	24,496	1,454	3,198
1877	13,558	253,953	169,196	19,870	2,810	2,439	2,355
1878	9,121	191,982	185,931	10,979	3,088	...	2,302
1879	10,710	274,570	144,506	4,655	1,239	440	2,444
1880	12,679	242,020	163,738	17,772	477	1,016	1,480
1881	9,959	127,832	101,075	24,509	...	1,844	2,086
1882	12,261	215,056	54,799	20,126	611	3,226	403
1883	13,471	152,794	182,269	10,436	731	1,642	10,983
1884	13,683	144,851	118,811	7,155	10,746	1,320	9,168
1885	13,334	124,206	117,536	15,801	1,116	...	1,912
1886	19,474	154,169	219,442	1,595	4,911	564	14,657
1887	23,949	221,927	114,938	9,574	12,050	...	12,533
1888	16,983	160,963	194,886	5,906	26,629	811	13,608
1889	7,931	126,664	353,595	4,272	28,356	2,673	18,552
1890	14,461	118,002	327,394	10,830	27,728	1,549	20,876
1891	13,517	198,658	185,180	8,113	52,959	64,888	28,042
1892	17,046	232,019	192,548	6,433	37,173	9,392	32,815
1893	15,235	258,392	441,092	18,599	31,283	3,671	36,981
1894	33,628	270,993	169,233	28,353	27,962	567	60,673
1895	44,044	203,088	164,894	8,689	18,236	1,007	46,463
1896	42,425	320,563	320,444	11,368	28,178	9,405	56,591
1897	9,065	324,743	390,615	14,173	25,161	8,483	44,674
1898	5,578	207,647	437,861	12,286	17,502	16,127	23,182
1899	11,625	197,732	204,004	2,907	24,037	923	18,460
1900	10,968	137,800	163,509	4,035	41,055	3,538	14,815
1901	18,978	151,586	67,756	7,119	28,485	2,961	14,024
1902	22,282	225,171	67,647	7,418	11,232	4,079	12,963
1903	25,998	259,031	210,758	14,656	7,911	4,904	13,994
1904	35,049	165,138	116,444	27,171	16,582	...	13,183
1905	38,512	254,458	180,921	55,432	36,072	1,711	9,883
1906	18,294	326,798	211,805	31,446	49,306	1,784	10,739
1907	22,739	488,565	271,693	13,240	73,369	2,270	22,683
1908	23,209	732,131	127,402	31,172	33,423	6,667	21,668
1909	38,763	590,196	140,902	23,151	75,135	33	30,221
1910	41,152	587,493	229,980	21,575	136,233	...	18,149
1911	57,061	562,282	273,932	15,029	163,333	112	11,360
1912	45,807	795,989	121,333	25,241	185,546	714	14,626
1913	45,710	1,005,362	144,354	96,889	199,794	6,867	10,640
1914	87,701	1,599,909	112,133	89,622	225,668	10,220	10,318
1915	15,117	955,181	121,086	26,231	169,046	5,999	...

\* Fiscal.    † Apples, meal of all kinds, peas, potatoes.

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and Down, through the Welland canal, during a period of forty-five years, ended 31, 1915.

Total.	Railway Iron.	Other Iron.	Sugar and Salt.	Iron & Salt having paid full tolls on St. Lawrence canals.	Coal.	Ores.	Total.
Tons.	Tons.	Tons	Tons	Tons	Tons	Tons.	Tons.
503,860	46,806	16,924	91,575	37,153	103,126	58,781	275,623
538,147	26,217	17,141	50,540	44,243	186,932	98,605	3,678
579,880	6,923	20,754	40,850	17,157	339,016	118,685	43,387
647,397	6,032	12,068	23,309	9,579	323,503	56,825	431,316
417,936	1,517	7,588	13,509	9,962	321,306	43,683	397,565
409,788	51	7,997	30,300	20,327	288,211	81,654	378,540
464,181	9,630	9,696	9,173	3,983	323,869	42,758	399,109
403,403	10	11,518	3,980	12,686	295,318	15,229	338,741
438,564	2,782	5,797	7,174	17,796	192,957	19,164	245,670
442,182	5,360	4,812	413	22,273	109,986	34,139	176,983
269,395	4,585	7,013	10	30,682	128,113	18,785	189,188
306,482	.....	5,348	50	17,327	237,559	23,700	283,984
373,326	1,237	7,922	66	17,037	307,058	31,785	365,105
305,734	698	652	461	3,242	274,471	53,205	332,729
273,905	78	2,055	597	14,243	248,272	26,728	291,973
414,812	166	6,123	48	12,324	271,356	27,447	317,464
394,971	1,351	5,636	.....	6,715	145,193	13,866	172,761
419,786	93	3,220	316	13,617	223,871	16,872	257,989
542,043	47	2,479	1,254	20,269	268,305	2,435	294,789
519,291	.....	753	1,027	28,047	202,384	8,138	240,249
367,177	127	1,610	2,567	7,953	224,644	3,415	240,316
527,426	163	1,567	878	3,666	211,616	355	218,245
805,253	6	2,075	374	8,139	233,096	.....	243,690
591,409	.....	3,072	159	977	203,608	.....	207,816
486,421	185	6,245	54	2,819	158,866	1,140	169,309
788,974	1,192	6,332	82	3,264	223,445	1,158	235,473
816,914	7,206	17,012	227	590	176,226	.....	201,261
720,183	1,444	11,722	799	734	162,336	13,433	190,468
459,688	567	6,361	1,282	1,318	97,732	26,125	133,385
375,720	.....	8,190	533	4,800	47,392	58,400	119,315
290,909	83	6,094	327	8,773	49,480	99,487	164,244
350,792	64	7,488	.....	15,201	64,014	22,480	109,247
537,252	488	5,407	2,554	45,846	147,884	18,323	220,502
373,568	11,381	9,957	1,093	4,164	113,525	39,683	179,803
576,989	2,651	10,912	226	4,221	172,642	22,381	213,033
650,172	3,747	8,493	100	16,204	147,587	5,862	181,993
894,559	961	4,923	246	18,761	267,212	25,040	317,143
975,672	.....	35,726	429	.....	316,921	18,004	371,080
898,401	.....	87,025	.....	.....	377,681	33,301	498,007
1,034,582	.....	57,581	.....	.....	577,491	34,311	669,383
1,083,109	.....	126,956	35,888	.....	619,682	37,480	820,006
1,189,256	.....	139,991	21,630	.....	709,696	82,376	953,693
1,509,616	.....	96,245	28,396	.....	945,790	78,776	1,149,207
2,135,571	.....	34,037	35,060	.....	949,306	14,151	1,032,554
1,292,660	.....	46,039	30,250	.....	935,824	49,339	1,061,452

6 GEORGE V, A. 1916

B.—TABLE showing the Total Way and Through Tonnage of the under-mentioned articles cleared downward on the Welland canal during a series of forty-five years, ended December 31, 1915.

## VEGETABLE FOOD.

Years.	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Articles.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1869	44,110	310,090	119,541	3,920		680	1,541	479,882
1872	26,648	231,056	254,534	693	7,594	64	2,300	524,889
1873	30,660	345,720	180,042	643	1,188	3	3,557	563,813
1874	24,017	406,157	181,128	377	5,953		3,301	620,933
1875	13,930	248,555	103,477	813	3,383	500	4,304	374,962
1876	15,735	194,559	144,501	1,110	24,496	1,454	2,949	384,807
1877	13,588	248,894	169,185	10,216	2,810	2,405	1,833	488,931
1878	8,854	188,106	185,931	1,217	3,088		2,100	389,296
1879	10,588	271,545	114,276	803	1,196		2,387	430,795
1880	12,467	240,601	162,891		477		1,417	417,853
1881	9,655	121,393	103,075	252		6	1,371	235,752
1882	12,205	205,876	54,797	537		1,954	225	275,594
1883	13,256	146,741	182,143	975	731	518	10,971	355,335
1884	13,626	135,804	118,811	270	10,746	477	9,018	288,752
1885	13,322	114,090	117,536	618	1,116		1,628	248,310
1886	19,418	146,151	218,897		4,891		14,581	403,928
1887	23,940	210,755	114,938	1,711	12,050		12,149	375,543
1888	16,973	150,833	194,886	555	26,629	811	13,358	404,045
1889	7,922	120,498	353,595	197	28,356	1,918	18,273	530,759
1890	14,461	114,924	327,394	6,519	27,728	1,121	20,836	512,983
1891	13,517	196,326	185,177	8,113	52,959	65,071	27,895	549,058
1892	17,046	229,569	192,548	6,433	37,173	9,392	32,548	524,709
1893	15,232	257,203	441,092	18,461	31,283	3,671	36,981	803,923
1894	33,628	270,514	169,233	28,353	27,962		60,587	590,277
1895	43,895	202,636	164,894	8,689	18,236		46,435	484,785
1896	42,159	319,388	320,444	11,368	28,178	8,970	54,031	784,538
1897	9,025	322,993	390,615	14,173	25,127	8,483	44,651	815,067
1898	5,578	206,313	437,849	12,286	17,491	16,127	23,170	718,814
1899	11,625	197,732	204,004	2,424	23,541	923	18,440	458,689
1900	10,968	137,800	163,509	3,449	40,256	3,538	14,802	374,322
1901	18,937	151,325	67,757	7,119	28,281	2,961	14,021	290,400
1902	22,282	223,499	67,647	7,418	11,223	4,079	12,912	349,060
1903	25,997	257,370	210,758	14,656	7,911	4,904	13,982	535,578
1904	35,046	164,515	116,444	27,171	16,582		13,157	372,915
1905	38,512	247,599	180,921	55,432	36,072	1,711	9,882	570,129
1906	18,227	326,789	111,243	31,446	49,306	1,411	10,739	549,161
1907	22,689	488,565	271,693	13,240	73,369	2,270	22,683	894,509
1908	23,187	730,751	127,402	31,172	33,423	6,667	21,668	974,270
1909	38,763	590,074	140,902	23,151	75,135	33	30,206	898,264
1910	41,152	587,493	229,980	21,575	136,233		18,149	1,034,582
1911	57,061	562,282	273,932	14,622	163,333	112	11,360	1,082,702
1912	45,807	795,989	121,333	25,241	185,546	714	14,626	1,189,256
1913	45,710	1,005,362	144,354	96,889	199,794	6,867	10,640	1,509,616
1914	87,701	1,599,909	112,333	89,622	225,668	10,220	10,318	2,135,571
1915	15,087	946,004	121,086	26,231	168,876		5,999	1,283,283

\* Fiscal.    †Apples, meal all kinds, potatoes.

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D.—STATEMENT showing the Quantity of Through Freight passed down the Welland canal in Canadian and United States vessels entering the canal at Port Colborne, during the Season of Navigation in 1904, 1909, 1906, 1907, 1908, 1909, 1910, 1911, 1912, 1913, 1914 and 1915.

Articles.	Canadian Vessels.				United States Vessels.		Total.		
	Steam.		Sail.		Steam.		Sail.		
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	
	228	157,539	55	39,375	205	187,748	42	15,918	
							530	400,580	
1904.									
Wheat		Tons.		Tons.		Tons.		Tons.	
Corn		116,794		33,302		14,269		164,365	
Barley		12,768		7,814		95,862		116,444	
Oats		2,619		824		23,728		27,171	
Pease						16,261		16,261	
Rye		1,925		7,187		17,133		33,913	
Coal		34,907				1,925	7,668	36,832	
Miscellaneous merchandise		29,567				60,548		90,115	
Shingles, woodenware, etc.									
Sawed lumber	Ft. B.M	15,077,382		854,811		32,754,541	9,572,655	58,259,389	
Square timber	Cub. ft.	944,508		744,000			149,000	1,837,508	
Firewood	Cords					717		717	
Staves	No.	634,000						634,000	
		No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
		252	182,373	91	48,692	319	286,656	64	29,120
								726	546,841
1905.									
Wheat		Tons.		Tons.		Tons.		Tons.	
Corn		188,706		18,575		28,757	2,512	238,550	
Barley		6,385		6,636		163,374	4,526	180,921	
Oats		6,870		1,451		47,111		55,432	
Pease		8,225		2,570		21,535	3,742	36,072	
Rye						76		76	
Coal		18,756		35,324		28,330	8,678	91,088	
Iron ore		14,358		8,023				22,381	
Merchandise		29,375		7,485		74,975	3,126	114,961	
Shingles, woodenware, etc.				2,748,941		2,325		2,325	
Sawed lumber	Ft. B.M	2,867,147				38,290,831	12,479,689	54,589,200	
Square timber	Cub. ft.	355,000		951,524				538,000	
Firewood	Cords			183,000		900		900	
		No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
		328	238,690	121	65,355	305	310,622	43	15,758
								797	631,425
1906.									
Wheat		Tons.		Tons.		Tons.		Tons.	
Corn		250,493		34,355		35,578		320,436	
Barley		8,177				202,250	1,378	49,306	
Oats		8,546		5,046		17,854		31,446	
Pease		21,900		16,083		11,323		49,306	
Rye						11		11	
Coal		30,455		47,242		1,406		1,411	
Iron ore		5,862				24,190	9,356	111,243	
Merchandise		35,383		7,009		110,263		5,862	
Shingles, woodenware, etc.				37		851		152,705	
Sawed lumber	Ft. B.M	3,471,514		235,624		25,711,196	10,789,755	40,188,089	
Square timber	Cub. ft.	375,000		200,000				575,000	
Firewood	Cords			110		1,093		1,221	
Staves	No.					300,000		300,000	

D. -STATEMENT showing the quantity of Through Freight passed down the Welland canal in Canadian and United States vessels, etc.—*Continued.*

Articles.	Canadian Vessels.		American Vessels.		Total.
	Steam.	Sail.	Steam.	Sail	
	No. Tonnage.	No. Tonnage.	No. Tonnage.	No. Tonnage.	No. Tonnage.
	375   290,509	148   81,070	408   397,616	76   36,921	1007   816,116
1907.					
Wheat	Tons.	Tons.	Tons.	Tons.	Tons.
	294,298	50,808	130,818	4,429	480,303
Corn		6,713	514	259,895	271,693
Barley.....		8,726	468	4,046	13,240
Oats.....		49,689	16,647	7,033	73,369
Pease				25	25
Rye				2,270	2,270
Coal.....		31,506	57,373	50,183	143,555
Iron ore		12,040	8,950		20,990
Merchandise		21,545	9,436	5,231	42,447
Shingles, woodenware, etc..				2,222	2,222
Sawed lumber.....Ft. B.M				14,395,124	25,596,570
Square timber.....Cub. ft		558,090	323,000		881,090
Firewood.....Cords				660	660
	No.   Tonnage.	No. Tonnage.	No. Tonnage.	No. Tonnage.	No. Tonnage.
	567   432,623	149   64,034	428   319,030	36   19,866	1180   835,553
1908.					
Wheat	Tons.	Tons.	Tons.	Tons.	Tons.
	505,151	39,001	183,011	3,498	730,751
Corn.....		2,405	124,997		127,402
Barley.....		19,775	1,133	10,264	31,172
Oats.....		30,091	643	2,689	33,423
Pease...				40	40
Rye		742		5,925	6,667
Coal.....		33,733	42,656	57,448	148,181
Merchandise		26,815	14,783	14,410	69,694
Firewood.....Cords			70	1,173	1,243
Sawed lumber.....Ft. B.M				17,572,070	24,150,615
Square timber.....Cub. ft		221,300	313,000		534,300
	No.   Tonnage.	No. Tonnage.	No. Tonnage.	No. Tonnage.	No. Tonnage.
	555   486,406	136   71,034	323   324,576	26   17,317	1040   899,333
1909.					
Wheat	Tons.	Tons.	Tons.	Tons	Tons
	415,208	34,903	133,172		583,283
Corn.....		6,694	134,208		140,902
Barley		17,943	360	4,848	23,151
Oats		70,392	4,743		75,135
Pease				63	63
Rye		33			33
Coal.....		160,475	53,681	21,097	235,883
Merchandise...		52,994	14,732	12,232	96,506
Sawed lumber.				31,643	41,857
Square timber.		3,450	7,840	125	12,890

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D.—STATEMENT showing the Quantity of Through Freight passed down the Welland canal in Canadian and United States vessels, etc.—Continued.

Articles.	Canadian Vessels.			American Vessels.			Total.	
	Steam.		Sail.	Steam.		Sail.	Steam and Sail.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	596	599,416	142	88,963	249	285,704	14	13,563
							1001	987,646
1910								
Wheat.		Tons.		Tons.		Tons.		Tons.
Corn	481,624		22,200		77,040			580,864
Barley.....	15,759				214,221			229,980
Oats	17,159		576		3,840			21,575
Pease	135,743				490			136,233
Rye					123			123
Coal	216,679		114,671		29,646		894	361,990
Merchandise	39,149		15,231		21,818		20,466	96,664
Sawed lumber	3,630		800		16,932			21,362
Square timber	1,930		5,000		800			7,730
Shingles					525			525
Unenumerated.....	74,434		1,772		24,031			100,237
Total	986,207		160,250		389,466		21,360	1,557,283
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	640	670,037	122	83,755	270	304,171	48	42,830
							1080	1,100,793
1911.								
Wheat		Tons		Tons.		Tons		Tons
Corn	483,984		24,826		49,330			558,140
Barley	29,978		11,363		232,586			273,932
Oats	14,382		240					14,622
Pease....	162,455		878					163,333
Rye.		112						112
Coal	230,809		79,311		40,109		22,489	372,718
Merchandise.	45,838		19,325		45,881		34,449	145,493
Sawed lumber	300				25,361		9,020	34,681
Square timber.	3,260		4,500		2,277			10,037
Shingles					60			60
Unenumerated...	95,017				14,386			109,403
Total.....	1,066,135		140,448		409,990		65,958	1,682,513
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	774	790,044	152	95,202	450	427,226	52	33,102
							1428	1,345,574
1912.								
Wheat		Tons		Tons.		Tons.		Tons
Corn.....	603,854		78,794		111,284			793,932
Barley	536		2,181		118,616			121,333
Oats	22,022		353		2,866			25,241
Pease	170,446		3,269		11,831			185,546
Rye					150			150
Coal	331,536		44,212		714			714
Merchandise.	48,659		17,602		154,653		3,800	534,201
Sawed lumber.					47,836		32,340	146,437
Square timber	9,000		8,660		22,689		15,361	38,050
Shingles					1,409			19,069
Unenumerated.....	73,387		1,186		250			250
Total	1,259,440		156,257		69,367		51,501	2,088,863

D.—STATEMENT showing the Quantity of Through Freight passed down the Welland canal in Canadian and United States vessels, etc. *Concluded.*

Articles.	Canadian Vessels.				United States Vessels.				Total.			
	Steam.		Sail.		Steam.		Sail.		Steam and Sail.			
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.		
	1043	1,081,973	148	104,194	375	386,284	28	18,908	1594	1,590,459		
1913.												
Wheat		Tons.		Tons.		Tons.		Tons.		Tons.		
Corn		761,418		87,153		154,768		1,003,339		1,003,339		
Barley		1,549				142,805				144,354		
Oats		82,241		2,448		12,200				96,889		
Pease		188,442		1,937		9,415				199,794		
Rye		3,136				3,731				6,867		
Coal		498,269		59,145		107,946		1,735		667,095		
Merchandise		59,375		18,701		28,825		21,008		127,909		
Sawed timber		1,500				19,200		3,736		24,436		
Square timber		4,636		4,004		1,040				9,680		
Shingles		183,957		9,059		76,613		3,550		273,179		
Unenumerated												
Total....		1,784,523		182,447		556,543		30,029		2,551,531		
		No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	
	1301	1,345,319	154	93,099	357	353,547	25	7,279	1837	1,799,244		
1914.												
Wheat		Tons.		Tons.		Tons.		Tons.		Tons.		
Corn		1,268,410		101,833		189,666				1,559,909		
Barley		4,973		1,422		105,738				112,133		
Oats		80,488		4,423		4,711				89,622		
Pease		210,795		3,699		10,982				225,476		
Rye		1,114				9,106				10,220		
Coal		531,240		32,288		132,215		501		686,544		
Merchandise		61,135		16,751		14,987				92,873		
Sawed timber		450				17,285		1,670		19,405		
Square timber		4,846				1,397				6,243		
Shingles		175								175		
Unenumerated		102,804				20,936		400		124,140		
Total....		2,266,430		160,416		507,023		2,871		2,936,740		
		No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	
	856	885,441	161	105,309	285	310,071	7	2,133	1,809	1,302,954		
1915.												
Wheat.....		Tons.		Tons.		Tons.		Tons.		Tons.		
Corn.....		679,534		105,391		161,079				946,004		
Barley		14,742		1,089		105,255				121,086		
Oats.....		23,878		1,663		690				26,231		
Pease		163,125		2,830		2,921				168,876		
Rye						840				840		
Coal.....		465,649		51,975		160,162		1,490		679,276		
Merchandise		97,085		18,105		37,862				153,052		
Sawed lumber		2,543				17,565				20,108		
Square timber		4,650				1,381				6,031		
Shingles		22,972		1,159		8,499		1,170		33,800		
Unenumerated												
Total....		1,474,178		182,212		496,254		2,660		2,155,304		

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## WELLAND CANAL THROUGH FREIGHT—RECAPITULATION.

## WELLAND CANAL—WESTBOUND FREIGHT.

The total quantity of Through Freight passed up the Welland canal in Canadian and United States vessels during the Season of Navigation in 1915 is as follows:—

Summary.	Tons.	Tons.
In Canadian steam vessels		
" sail vessels.....	257,548 2,077	
Total quantity in Canadian vessels .....		259,625
In United States steam vessels.....	426,130	
" sail vessels.....		
Total in United States vessels .....		426,130
Grand total freight passed up the Welland canal in Canadian and United States vessels.....		685,755

STATEMENT of the Quantity of Through Freight passing up and down the Welland canal during the Season of Navigation in 1915.

Summary.	Tons.	Tons
In Canadian steam vessels up.....		
" down .....	257,548 1,474,178	
Total in Canadian steam vessels .....		1,731,726
In Canadian sail vessels up.....		
" down.....	2,077 182,212	
Total in Canadian sail vessels .....		184,289
Total quantity in Canadian vessels.....		1,916,015
In United States steam vessels up.....		
" down.....	426,130 496,254	
Total in United States vessels .....		922,384
In United States sail vessels up		
" down.....	669	
Total in United States sail vessels .....		2,660
Total quantity in United States vessels.....		925,044
Total in Canadian and United States vessels.....		2,841,059
	Down or East bound	Up or West bound.
In Canadian vessels		
In United States vessels.....	1,676,390 498,914	259,625 426,130
Total.....	2,155,304	685,755

## DEPARTMENT OF RAILWAYS AND CANALS

6 GEORGE V, A. 1916

F.—STATEMENT showing the Quantity of Freight passed Eastward, from Lake Erie, through the whole length of the Welland and St. Lawrence canals, to Montreal, during the Seasons of Navigation 1903 to 1915.

Articles.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.	1914.	1915.
<i>Class 3.</i>													
Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Cement and water lime.													
Clay, lime and sand	35	22											
Iron, railway	8,170	10											
" all other	2,542	384	260	124	553	12,689	7,154	1,901	28,096	5,402	439	2,573	9,880
Steel													
Stone, for cutting.													
Apples	1												
Barley	9,697	43,607	21,196	105,984	24,318	19,143	20,000	14,853	36,784	60,564	25,108		
Corn	55,021	54,204	55,559	49,159	10,454	17,137	77,612	134,239	9,345	9,341	6,031	18,643	
Flaxseed	5,643	212	15,694	80,570	27,500	19,634	6,607	11,696	15,413	117,548	4,285	10,317	
Flour	16,151	24,662	14,574	9,174	3,730	5,028	21,905	27,981	14,588	38,026	31,152	60,723	10,295
Meal, all kinds	348	57	270	60	156	156	10,323	3,967	10,323	129,900	164,781	151,075	
Oats	2,438	7,846	21,404	66,941	28,081	65,624							
Oil cake	7,462	9,229	9,229										
Pease	63												
Rye.	4,260	615	1,711	1,405	2,266	6,662	30	10	714	4,567	9,585		
Salt	132		168	75	143	419	120	931	931	686	100	142	
Seed, all kinds													
Hay, pressed													
Tobacco, raw													
Wheat	226,746	133,528	190,505	289,611	450,446	680,626	550,775	562,149	541,174	768,633	763,551	1,184,645	925,201
All other agricultural products, vegetables and													
Hides, skins, horns and hoofs													
Horses													
Lard and lard oil													
Meats, all kinds													
Pork													
Tallow													
All other agricultural products, animal													
Total class 3.	382,858	241,522	384,727	499,895	668,749	790,321	718,951	841,310	934,158	1,045,262	1,069,500	1,420,202	1,151,736

## CANAL STATISTICS

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Class 4.		Agricultural implements		1,548	
Ashes	2	17	16	43	36
Bricks	3	6	3	21	2
Crockery	5	11	4	11	4
Furniture	15	21	3	20	3
Glass, all kinds	240	64	22	111	3
Molasses	19	20,700	19,995	30,002	30,012
Nails	11,619	53	101	149	48,401
Oil	5	53	15	97	67,576
Paint	4	72	72	345	2,812
Pitch and tar	20	2,019	2,019	1,177	2,728
Rags	57	53	53	1,244	3,475
Resin	766	635	614	1,056	3,417
Soda ash	766	635	614	1,739	1,298
Sugar	766	635	614	959	711
Tin.	766	635	614	9,224	4,270
Tobacco	766	635	614	11,254	13,601
White lead	766	635	614	10,418	3,210
Whisky, beer and other spirits	766	635	614	2,126	—
Merchandise not enum- erated	582	551	466	581	65,021
Total, class 4	15,560	14,456	11,456	34,730	74,078
Class 5		Barrels, empty		173	
Hoops.	394	3,957	100	300	773
Sawed lumber	394	2,400	2,400	—	—
Staves, pipe and barrel	1,544	1,260	1,500	900	12,907
Staves, West India and	1,544	1,260	4,180	3,444	4,670
pipe.	1,408	5,217	4,000	900	5,444
Timber, scd., in vessels.	—	—	—	—	—
Timber, scd., in rafts	—	—	—	—	—
Woodenware.	—	—	—	—	—
Total, class 5	—	—	—	—	—
Special classes.		Barrels, empty		563,197	
Total	17,362	29,172	29,567	298,573	424,988
Iron ore	—	—	—	12,467	12,467
Stones, all kinds	17,362	33,188	29,567	298,573	437,455
Total, special class	—	—	—	—	—
Grand total	398,427	275,278	44,704	1,170,633	1,293,903
				1,559,903	2,052,900
				1,513,998	1,513,998

—STATION showing the quantity of freight passed through the whole length of the St. Lawrence and Welland canals to Lake Erie, during the seasons of Navigation in 1903, 1904, 1905, 1906, 1907, 1908, 1910, 1911, 1912, 1913, 1914 and 1915.

Articles.	Class 3.				
	1903.	1904.	1905.	1906.	1907.
Bricks	Tons.	Tons.	Tons.	Tons.	Tons.
Brimstone	80	115	132	556	556
Cement and water lime	23	12	181	88	13
Clay, lime and sand	39	39	400	100	100
Cotton, raw	3,924	181	181	8	8
Fish	23	23	17,565	8,625	40,074
Gypsum	8	4	400	39	400
Iron, railway	39,641	283	126	4,119	7,231
" pig	273	3	312	7,655	6,987
" all other	5,845	3,782	3,633	540	17
Salt	87	99	150	111	2,561
Steel	332	58	192	41	35,153
Stone for cutting					18
Flour					30
Hay					255
Meals					17
Oats					25
Potatoes					1,113
Seeds, all kinds					
Tobacco, raw					
Agricultural products, not enumerated, vegetable					
Hides and skins					
Horses					
Lard and lard oil					
Meats, other than pork					
Pork					
Wool					
All other articles not enumerated					
Total, class 3	50,768	4,647	4,934	16,457	22,076
					43,039
					21,278
					34,427
					87,282
					109,366
					25
					150
					150
					164
					20,012

Class 4.		Class 5.		Class 6.		Class 7.		Class 8.		Class 9.		Class 10.	
Agricultural implements	2	291	2	294	2	295	2	296	2	297	2	298	2
Ashes, pot and pearl	32	155	1	156	2	157	2	158	2	159	2	160	2
Crockery and earthenware	1	1,207	1,671	1,671	1,641	1,641	1,641	1,641	1,641	1,641	1,641	1,641	
Dye woods, etc	1	1	24	24	93	93	93	93	93	93	93	93	
Furniture	1	1	1	1	1	1	1	1	1	1	1	1	
Glass, all kinds	1	1	1	1	1	1	1	1	1	1	1	1	
Manilla	1	1	1	1	1	1	1	1	1	1	1	1	
Marble	1	1	1	1	1	1	1	1	1	1	1	1	
Molasses	1	1	1	1	1	1	1	1	1	1	1	1	
Nails	1	1	1	1	1	1	1	1	1	1	1	1	
Oil, in barrels	1	1	1	1	1	1	1	1	1	1	1	1	
Paint	1	1	1	1	1	1	1	1	1	1	1	1	
Pitch and tar	1	1	1	1	1	1	1	1	1	1	1	1	
Rags	1	1	1	1	1	1	1	1	1	1	1	1	
Resin	1	1	1	1	1	1	1	1	1	1	1	1	
Soda ash	1	1	1	1	1	1	1	1	1	1	1	1	
Stone, wrought	1	1	1	1	1	1	1	1	1	1	1	1	
Sugar	1	1	1	1	1	1	1	1	1	1	1	1	
Tin	1	1	1	1	1	1	1	1	1	1	1	1	
Turpentine	1	1	1	1	1	1	1	1	1	1	1	1	
White lead	1	1	1	1	1	1	1	1	1	1	1	1	
Whiting	1	1	1	1	1	1	1	1	1	1	1	1	
Whisky, beer, etc	1	1	1	1	1	1	1	1	1	1	1	1	
Merchandise not enumerated	1	1	1	1	1	1	1	1	1	1	1	1	
Total, class 4	1	1	1	1	1	1	1	1	1	1	1	1	
Class 5.	1	1	1	1	1	1	1	1	1	1	1	1	
Barrels, empty	1	1	1	1	1	1	1	1	1	1	1	1	
Firewood, in vessels	1	1	1	1	1	1	1	1	1	1	1	1	
Pulpwood	1	1	1	1	1	1	1	1	1	1	1	1	
Lumber, sawn, in vessels	1	1	1	1	1	1	1	1	1	1	1	1	
Railway ties in vessels	1	1	1	1	1	1	1	1	1	1	1	1	
Woodenware	1	1	1	1	1	1	1	1	1	1	1	1	
Total, class 5	1	1	1	1	1	1	1	1	1	1	1	1	
Special class.	1	1	1	1	1	1	1	1	1	1	1	1	
Coal	1	1	1	1	1	1	1	1	1	1	1	1	
Iron ore	1	1	1	1	1	1	1	1	1	1	1	1	
Total, special class.	1	1	1	1	1	1	1	1	1	1	1	1	
Grand total	100,699	71,512	72,482	66,701	191,510	172,360	233,335	236,729	333,592	360,645	289,215	20	

Fig. 1. Diagram showing the quantity of Freight passed Eastward and Westward through the Great Lakes during the seasons of Navigation from 1903 to 1915, inclusive.

Articles	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.	1914.	1915.
Others	Tons												
<b>Picks, cement and water lime</b>													
Fish													
Iron, railway													
" all other													
Salt													
Steel													
Stone for cutting													
Apple													
Bark													
Bone													
Flour													
Hay, pressed													
Meat, all kinds													
Marble													
Nails													
Oil cake													
Oranges													
Powder													
Potatoes													
Rye													
Flax seed													
Seeds, all kinds													
Tobacco													
Wheat													
Agricultural products, vegetable													
Hides and skins, etc.													
Horses													
Lard and lard oil, etc.													
Meat, other than pork													
Pork													
Sheep													
Tallow													
Wool													
Total, class 3.	168,720	130,301	163,301	196,301	196,061	182,085	196,061	161,735	164,654	134,654	133,659	184,782	122,008

Class 4		2		254	
Agricultural implements & pottery and earthen- ware		5		194	
Furniture		1		552	
Marble		17		42	
Molasses		1		4	
Nails	2,060	1	1	3	1
Oil, in barrel				15	1
Paint				45	2
Rags				8	2
Soda ash				45	2
Stone, wrought				15	1
Sugar				1	2
White lead				3	2
Whiting				8	2
Whisky, beer and all other spirits	2,010	1,554	2,008	2,324	30
Merchandise				41,621	41
Total, class 4	4,017	2,021	2,666	3,660	67
<i>Class 5</i>					
Empty barrels				1	1
Firewood, in vessels				1,980	3,609
Lumber, sawn, in ves- sels	30,194	15,726	27,701	14,314	21,571
Masts and spars, in ves- sels				154	2,248
Hop poles				652	62
Railway ties, in vessels				12	53
Shingles				1,500	70
Split posts				478	2,151
Staves, salt barrels				25	70
Timber, square, in ves- sels				125	1,583
Wood, hardware, etc.				2,932	1,550
Total, class 5	48,337	31,717	20,751	32,865	25,558
<i>Special Classes.</i>					
Coal		1,100	3,346	4,400	110,347
Stone, not suitable for cutting				2,734	4,483
Kryolite				1,316	4,979
Iron ore				1,552	5,202
Total, special class		1,100	3,346	4,400	114,397
Total, grand total	221,074	165,337	190,547	237,226	396,743
				209,518	193,838
				450,776	485,355
				415,736	525,303
				309,079	309,079

6 GEORGE V, A. 1916

## L.—STATEMENT of the quantity of Grain Transhipped to the following Ports for the season of 1915.

Ports.	Wheat.	Oats.	Barley.	Corn.	Other grain.	Total.	Total.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Tons.
Kingston.....	1,073,500	2,864,648	9,042	96,857		4,044,047	83,832
Prescott	51,834	18,706				70,540	1,873
Ogdensburg.	97,200					97,200	2,916
Total bushels	1,222,534	2,883,354	9,042	96,857		4,211,787	
Total tons...	36,676	49,017	217	2,712			88,621

## M.—The quantity of Coal passed through the Welland canal during a series of years from 1885 to 1915 inclusive, is as follows:—

Years.	From Canadian Ports to Canadian Ports.	From Canadian Ports to Canadian Ports.	From United States Ports to United States Ports.		From United States Ports to Canadian Ports.		Total.
	Up.	Down.	Up.	Down.	Up.	Down.	
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1885...			193,442	4,974	10,321	31,350	240,087
1886.....			184,564	5,400	22,187	49,724	261,875
1887...			81,617	1,163	26,775	25,968	135,523
1888...			172,381	878	17,365	27,183	217,807
1889			226,352	1,124	12,036	25,931	265,443
1890...	80		116,616	615	17,280	22,781	202,372
1891			185,190	1,382	17,374	20,698	224,644
1892			183,244	651	12,391	15,330	211,616
1893.....			204,704	2,123	8,325	17,944	233,096
1894...			187,794	727	1,269	13,947	203,737
1895...	4		148,887	603	1,565	7,807	158,866
1896	20	210	206,093	1,255	4,127	11,740	223,443
1897...		4	165,143		1,277	9,799	176,225
1898			156,055	759	986	4,556	162,336
1899...			86,638	2,293	525	8,276	97,732
1900		8	45,032	992		1,360	47,392
1901...			46,345	357	456	2,322	49,480
1902...			12,410	501	65	51,037	64,013
1903	3		113,016		4,796	30,009	147,884
1904	2,919		62,782	1,100	3,711	32,813	103,325
1905			70,118	3,246	11,436	37,742	172,642
1906	69		29,123	4,400	7,161	106,843	147,587
1907...	2,857		110,347		10,453	143,555	267,212
1908.....	4,401		158,351		5,988	148,181	316,921
1909			130,731	400	11,067	235,483	377,681
1910	2,045		197,482	4,411	15,974	357,579	577,491
1911		731	221,752	2,160	24,451	370,558	619,682
1912...			163,461	2,958	12,034	531,243	709,696
1913.....			235,730	1,500	42,965	665,795	945,790
1914...			236,976		13,107	699,223	949,306
1915.....			71	235,929	4,015	695,809	935,824

## SESSIONAL PAPER No. 20a

N.—STATEMENT showing the quantity of Coal passed through the whole length of the St. Lawrence canals during the season of 1885 to 1915 inclusive.

Years.	Quantity passed up.	Quantity passed down to Montreal.	Total Quantity passed up and down.
			Tons.
1885	5,035	122,829	127,864
1886	3,301	118,802	122,103
1887	7,579	121,618	129,197
1888.	8,341	123,050	131,391
1889.	5,369	124,290	129,650
1890.	6,538	135,168	141,706
1891.	7,951	141,701	149,652
1892.	7,543	157,134	164,677
1893	2,285	147,139	149,424
1894.	16,213	169,552	185,765
1895.		165,151	165,151
1896	689	161,551	162,240
1897	40	164,963	165,003
1898.	400	175,609	176,009
1899	448	201,546	201,994
1900.	10	280,169	280,179
1901.	2,765	298,245	301,010
1902	9,231	95,702	104,933
1903.	30	290,548	290,578
1904	9,670	320,973	330,643
1905.	8,518	345,589	354,107
1906	6,989	313,080	320,069
1907	1,281	406,978	408,259
1908	23,939	448,140	472,079
1909	13,543	469,695	483,238
1910	7,351	746,926	754,277
1911	6,230	756,474	762,704
1912	9,300	903,237	912,537
1913	3,500	1,225,288	1,228,788
1914.	7,750	1,038,127	1,045,877
1915	7,644	1,025,821	1,033,485

O. - STATEMENT showing the quantity of Through Freight passed down the Welland canal, etc.

## RECAPITULATION.

Articles.	1904	Quantity passed down to Montreal.	Quantity passed down to Canadian ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports on Lake Ontario.
		Tons.	Tons.	Tons.
Barley		9,697	853	16,621
Corn		55,021	3,950	57,473
Oats				16,497
Peas				
Rye				3
Wheat		*133,528	18,908	11,929
<b>Total, grain</b>		<b>198,246</b>	<b>23,711</b>	<b>102,523</b>
Other articles.....		77,031	80,092	138,475
<b>Total</b>		<b>375,277</b>	<b>103,803</b>	<b>240,988</b>
	1905			
Barley		43,607	2,628	9,197
Corn		84,204	3,095	93,622
Oats		21,404	3,776	10,892
Peas				76
Rye		1,711		
Wheat		190,505	32,562	15,483
<b>Total, grain</b>		<b>*341,431</b>	<b>42,061</b>	<b>129,270</b>
Other articles.....		107,273	123,225	104,747
<b>Total</b>		<b>448,704</b>	<b>165,286</b>	<b>234,017</b>
	1906			
Barley.....		21,196	984	9,266
Corn.....		55,559	15,688	140,558
Oats.....		37,164	819	11,323
Peas.....			11	
Rye.....		1,405	6	
Wheat.....		***259,611	15,843	14,972
<b>Total grain</b>		<b>404,935</b>	<b>33,351</b>	<b>176,119</b>
Other articles.....		118,224	176,277	59,884
<b>Total</b>		<b>523,159</b>	<b>209,628</b>	<b>236,003</b>
	1907			
Barley.....		9,956	492	2,812
Corn.....		106,299	31,901	133,493
Oats.....		67,063	1,565	4,741
Peas.....				25
Rye.....		2,266	2	2
Wheat.....		450,009	8,072	22,222
<b>Total grain.....</b>		<b>635,573</b>	<b>42,032</b>	<b>163,295</b>
Other articles.....		153,594	126,423	93,127
<b>Total.....</b>		<b>789,167</b>	<b>168,455</b>	<b>256,422</b>

## SESSIONAL PAPER No. 20a

O.—STATEMENT showing the Quantity of Through Freight passed down the Welland canal, etc.—*Continued.*RECAPITULATION—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports on Lake Ontario.
		Tons.	
1908.			
Barley	24,318	3,546	3,308
Corn	10,454	11,489	105,459
Oats.....	28,081	3,272	2,070
Peas			40
Rye	6,662	3	2
Wheat	1686,626	19,832	24,293
<b>Total grain</b>	<b>756,141</b>	<b>38,141</b>	<b>135,172</b>
Other articles.....	108,785	162,378	91,875
<b>Total.....</b>	<b>864,926</b>	<b>200,520</b>	<b>227,047</b>
1909			
Barley	19,143		4,008
Corn	17,137	22,798	100,967
Oats.....	65,624	2,872	6,639
Peas	30		33
Rye	33		
Wheat.....	550,775	14,568	17,940
<b>Total grain.....</b>	<b>652,742</b>	<b>40,238</b>	<b>129,587</b>
Other articles.....	272,263	113,970	126,223
<b>Total.....</b>	<b>925,005</b>	<b>154,208</b>	<b>255,810</b>
1910			
Barley	20,000		1,575
Corn.....	77,612	49,326	103,042
Oats	129,900	6,333	
Peas.....			128
Rye			
Wheat.....	562,149	7,998	10,717
<b>Total grain.....</b>	<b>789,661</b>	<b>63,657</b>	<b>115,457</b>
Other articles.....	380,500	152,325	55,683
<b>Total.....</b>	<b>1,170,161</b>	<b>215,982</b>	<b>171,140</b>
1911.			
Barley	14,331	291	
Corn.....	134,239	22,988	116,705
Oats.....	147,180	16,153	
Peas.....			
Rye		112	
Wheat.....	541,174	12,016	4,950
<b>Total grain.....</b>	<b>836,924</b>	<b>51,560</b>	<b>121,655</b>
Other articles.....	500,881	115,721	55,790
<b>Total.....</b>	<b>1,337,805</b>	<b>167,281</b>	<b>177,445</b>

6 GEORGE V, A. 1916

O.—STATEMENT showing the Quantity of Through Freight passed down the Welland canal, etc.—*Concluded.*

RECAPITULATION—*Concluded.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports on Lake Ontario.
		Tons.	Tons.
Barley	20,572	218	4,451
Corn	7,345	1,372	112,616
Oats	164,581	20,965	
Peas	10	12	128
Rye	714		
Wheat	768,633	25,299	
Total grain	961,855	47,866	117,195
Other articles.....	598,108	214,395	69,444
Total	1,559,963	262,261	186,639
1913.			
Barley	91,856	5,033	
Corn	9,344	20,348	114,662
Oats	173,827	18,560	7,407
Peas			
Rye	4,567	2,300	
Wheat	985,774	17,565	
Total grain	1,265,368	63,806	122,069
Other articles	916,254	135,742	50,303
Total	2,181,622	199,548	172,372
1914			
Barley	89,622		
Corn	6,031	85,700	20,402
Oats	204,166	5,210	16,292
Peas			
Rye	9,385		835
Wheat	1,527,252		32,657
Total grain	1,836,456	90,910	70,186
Other articles	855,855	46,652	36,681
Total	2,692,311	137,562	106,867
1915.			
Barley	25,108	433	690
Corn	18,643	13,174	89,269
Oats	151,075	17,344	457
Peas		840	
Rye			
Wheat	925,201	1,409	19,394
Total grain	1,120,027	33,200	109,810
Other articles	778,273	74,677	39,317
Total	1,898,300	107,877	149,127

TABLE 1.—Comparative Statement of Grand Total Freight passed through the undermentioned canals during the Seasons of Navigation 1914 and 1915.

From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Total Tons.		Origin of Cargo.	
										Up.	Down.
1914.											
Sault Ste. Marie	379,703	2,490,510	10,174	5,2,175	1,153,050	21,438,985	1,245,894	298,693	2,788,821	24,810,363	27,599,184
Welland	225,532	1,769,052	278,955	450	335,455	170,624	1,064,794	856,049	3,601,920	3,600,969	2,013,619
St. Lawrence	571,331	1,725,196	413,149	91	416	1,679,828	1,416	405,539	4,391,493	2,738,649	1,847,350
Chamblly	4,335	8,492	295,258	..	..	128,820	..	299,593	137,312	436,905	1,652,844
St. Peters	21,793	32,387	..	..	..	..	..	21,793	32,387	54,150	128,814
Murray	76,021	2,938	1,490	35,559	..	..	..	3,458	77,511	54,164	16
Ottawa	57,330	238,317	..	..	..	..	..	3,926	6,396	83,907	2,961
Rideau	40,867	62,009	230	..	..	..	..	..	61,256	273,876	325,059
Trent	15,531	52,009	..	..	..	..	..	..	81,097	70,642	142,203
St. Andrews	41,681	332	..	..	..	..	..	..	15,531	52,184	67,715
Grand total	1,474,124	6,385,242	999,256	618,275	1,491,563	21,610,033	1,264,343	3,184,401	5,229,286	31,793,951	37,023,237
1915.											
Sault Ste. Marie	287,474	1,614,502	14,987	582,654	176,083	4,691,580	333,705	49,972	812,249	7,750,957	2,561,734
Welland	180,710	1,105,813	242,26	2,519	329,449	1,56,167	4,015	1,040,053	756,460	3,061,012	5,189,223
St. Lawrence	421,377	1,324,318	401,244	4	42	186,516	1,874	1,260,203	824,537	2,584,930	1,426,256
Chamblly	5,648	6,325	280,218	..	..	..	..	..	285,866	192,441	2,024,755
St. Peters	491	2,404	..	..	..	..	..	..	491	2,404	1,384,712
Murray	25,696	3,066	..	..	..	..	..	1,966	25,696	2,895	186,516
Ottawa	43,583	165,817	58,154	..	..	..	..	4,516	48,399	30,728	27,942
Rideau	72,852	41,410	125	..	..	..	..	..	6,394	72,977	272,370
Trent	13,083	36,821	..	..	..	..	..	..	..	47,04	120,781
St. Andrews	21,800	182	..	..	..	..	..	..	..	36,821	114,358
Grand total	1,073,014	4,300,658	933,860	643,331	505,574	4,848,152	344,110	2,545,104	2,861,558	12,337,245	15,198,803
											6,789,423

# DEPARTMENT OF RAILWAYS AND CANALS

THE WILDERNESS.—Statement showing the Nationality of Vessels passing through the St. Lawrence River, and Number of Passes, during the Season of Navigation in 1915.

## SESSIONAL PAPER No. 20a

TABLE 3.—Statement showing the Number, Tonnage and Nationality of Vessels passed through the several canals during the Season of Navigation in 1915.

Total Number Vessels.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to Canadian Ports.		Total Tons.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.
Saint Ste. Marie Canal.								
Canadian vessels, steam.	2,742	1,355,307	1,191,877	47,129	203,895	2,992	151,784	1,438,431
“ sail.	258	18,384	20,383	689	4,804	5,297	700	25,387
Total Canadian	3,000	1,373,691	1,212,260	47,818	208,699	3,192	5,497	1,577,185
United States vessels, steam.	1,327	8,577	7,143	32,719	271,567	2,686,514	2,268,557	160,538
“ sail	4	40	34	—	40	40	—	891
Total United States	1,331	8,617	7,177	32,719	271,567	2,686,554	2,268,557	161,429
Grand total, Saint Ste. Marie canal	4,331	1,382,308	1,219,437	80,537	480,266	2,689,746	2,274,054	313,913
Welland Canal.								
Canadian vessels, steam.	1,760	585,318	604,723	282,681	400	6,354	935	9,245
“ sail	366	85,626	83,014	22,108	—	1,962	—	2,332
Total Canadian	2,126	670,944	687,737	304,789	400	8,316	935	11,577
United States vessels, steam.	758	4,159	1,914	135,262	4,621	234,835	147,514	—
“ sail	38	—	—	8,663	1,953	1,113	3,346	—
Total United States	796	4,159	1,914	143,930	6,574	235,948	150,860	—
Grand total, Welland canal	2,922	675,103	689,651	448,719	6,974	244,264	151,795	11,577
St. Lawrence Canals.								
Canadian vessels, steam.	4,474	956,101	965,496	342,090	49	—	—	—
“ sail	2,625	371,397	355,862	26,563	—	—	—	—
Total Canadian	7,099	1,327,498	1,321,358	368,653	49	—	—	—
United States vessels, steam.	981	3,435	4,002	351,347	10	11,595	470	735
“ sail	561	18,277	13,793	24,964	5	8,310	—	4,633
Total United States	1,542	21,712	17,795	376,311	5,320	11,600	470	5,368
Grand total, St. Lawrence canals	8,641	1,349,210	1,339,153	744,964	8,369	11,600	6,504	803,713
						1,270	—	2,112,278

TABLE 3.—Statement showing the Number, Tonnage and Nationality of Vessels passed through the several canals during the Season of Navigation in 1915—Concluded.

Vessels.	Total Number.	From Canadian Canadian Ports.				From Canadian United States Ports.				From United States to Canadian Ports.				Tons.	
		Up.		Down.		Up.		Down.		Up.		Down.		Total Tons.	
		Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.
<b>CHAMBLY CANAL.</b>															
Canadian vessels, steam . . . . .	308	22,093	23,010	3,011	3,118	127	127	3,540	3,540	22,093	23,010	6,678	6,678	45,103	45,103
“ “ sail. . . . .	180	4,099	3,011	—	—	—	—	—	—	7,217	7,217	—	—	13,895	13,895
Total Canadian. . . . .	488	26,192	26,021	3,118	3,118	127	127	3,540	3,540	29,310	29,310	—	—	58,998	58,998
United States vessels, steam . . . . .	1	—	—	—	—	—	—	—	—	—	—	19	19	—	—
“ “ sail	2,300	—	—	2,321	118,960	19	19	113,390	113,390	118,960	118,960	116,214	116,214	235,174	235,174
Total United States. . . . .	2,301	—	—	2,824	118,960	19	19	—	—	—	—	—	—	235,193	235,193
Grand total, Chambly canal. . . . .	2,789	26,192	28,845	122,078	146	—	—	116,930	116,930	143,270	143,270	145,921	145,921	294,191	294,191
<b>OTTAWA CANALS.</b>															
Canadian vessels, steam . . . . .	788	75,067	79,655	—	3,183	—	—	471	471	75,538	75,538	51,025	51,025	158,563	158,563
“ “ sail. . . . .	841	67,529	69,279	—	1,303	—	—	760	760	68,289	68,289	70,582	70,582	138,871	138,871
Total Canadian. . . . .	1,649	142,596	148,964	—	4,486	—	—	1,231	1,231	143,827	143,827	153,607	153,607	297,434	297,434
United States vessels, steam . . . . .	391	14,035	—	—	—	—	—	—	—	4,692	4,692	—	—	39,464	39,464
Total United States. . . . .	391	14,035	—	—	—	—	—	—	—	4,692	4,692	19,528	19,528	19,936	19,936
Grand total, Ottawa canals. . . . .	2,040	156,631	148,964	—	24,422	—	—	5,923	5,923	163,355	163,355	173,543	173,543	336,898	336,898
<b>RIDEAU CANAL.</b>															
Canadian vessels, steam . . . . .	1,817	51,326	55,155	15,001	3,952	126	—	—	—	4,378	55,278	59,659	59,659	114,937	114,937
“ “ sail	253	14,849	—	—	—	—	—	—	—	—	14,849	15,001	15,001	29,850	29,850
Total Canadian. . . . .	2,070	66,175	70,156	—	3,952	126	—	—	—	4,378	70,127	74,660	74,660	144,787	144,787
United States vessels, steam . . . . .	6	—	—	—	—	—	—	—	—	—	—	293	293	586	586
Total United States. . . . .	6	—	—	—	—	—	—	—	—	—	—	293	293	586	586
Grand total, Rideau canal. . . . .	2,076	66,468	70,449	—	3,952	126	—	—	—	4,378	70,420	74,953	74,953	145,373	145,373

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St. PETERS CANAL.	37	2,212	1,503	1,503	3,715
Canadian vessels, steam.....	34	526	1,409	1,409	1,935
"    "    sail.....					
Total Canadian .....	71	2,738	2,912	2,912	5,650
United States vessels, steam.....					
"    "    sail.....					
Total United States.....					
Grand total, St. Peters canal.....	71	2,738	2,912	2,912	5,650
TRENT VALLEY CANALS.					
Canadian vessels, steam.....	2,855	67,813	66,634	66,634	134,447
"    "    sail.....	578	19,573	18,760	18,760	38,353
Total Canadian .....	3,433	87,386	85,394	85,394	172,780
United States vessels, steam.....					
"    "    sail.....					
Total United States.....					
Grand total, Trent Valley canals .....	3,433	87,386	85,394	85,394	172,780
MURRAY CANAL.					
Canadian vessels, steam.....	478	55,116	51,456	51,456	108,859
"    "    sail.....	74	8,213	7,018	7,454	15,647
Total Canadian .....	552	63,329	58,474	58,890	124,506
United States vessels, steam.....					
"    "    sail.....					
Total United States.....					
Grand total, Murray canal.....	600	63,651	58,781	59,542	125,913
St. ANDREWS CANAL.					
Canadian vessels, steam.....	664	21,723	22,579	21,723	44,302
"    "    sail.....	423	26,732	26,676	26,732	56,408
Total Canadian .....	1,087	48,455	49,255	49,255	97,710
United States vessels, steam.....					
"    "    sail.....					
Total United States .....					
Grand total, St. Andrews canal	1,087	48,455	49,255	49,255	97,710

6 GEORGE V, A. 1916

TABLE 4—Comparative Statement of all the Canals for the years ending December 31, 1914 and 1915.

Articles.	1914.	1915.	Increase.	Decrease.
<i>Class No. 1.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Canadian vessels, steam ..	10,244,207	8,052,740	..	2,191,467
" sail ..	1,806,649	1,345,467	..	461,182
United States vessels, steam ..	15,253,993	6,980,212	..	8,273,781
" sail	382,421	404,889	22,468	..
<b>Total, Class No. 1.....</b>	<b>27,687,270</b>	<b>16,783,308</b>	<b>22,468</b>	<b>10,926,430</b>
<i>Class No. 2.</i>	<i>No.</i>	<i>No.</i>	<i>No.</i>	<i>No.</i>
Passengers	287,326	250,836	..	36,490
<i>Class No. 3.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Barley ..	332,983	161,590	..	171,393
Buckwheat ..	317	12	..	305
Corn ..	154,335	163,527	9,192	..
Oats ..	816,232	637,420	..	178,812
Rye ..	45,954	11,878	..	34,076
Flax ..	108,671	59,771	..	48,900
Peas ..	84	1,001	917	..
Wheat ..	6,045,317	3,807,722	..	2,237,595
Flour ..	408,708	310,385	..	98,323
Hay ..	15,008	9,874	..	5,134
Other mill products ..	15,844	8,988	..	6,856
Fruit and vegetables ..	12,224	8,878	..	3,346
Potatoes ..	7,191	1,479	..	5,712
Live stock ..	1,587	1,205	..	382
Poultry, game and fish ..	1,529	625	..	904
Dressed meats ..	61	79	18	..
Other packing house products ..	1,523	1,677	154	..
Hides and leather ..	40	26	..	14
Wool ..	484	183	..	301
All other animal products ..	10,457	7,494	..	2,963
<b>Total, Class No. 3.....</b>	<b>7,978,549</b>	<b>5,193,814</b>	<b>10,281</b>	<b>2,795,016</b>
<i>Class No. 4.</i>	<i>Tons</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Agricultural products ..	14,085	21,570	7,485	..
Cement, bricks, lime ..	147,657	34,996	..	112,661
Household goods and furniture ..	3,469	2,158	..	1,311
Iron pig and bloom ..	41,846	30,918	..	10,928
Iron and steel, all other ..	162,179	174,641	12,462	..
Petroleum and other oils ..	135,751	134,877	..	874
Sugar ..	71,036	61,975	..	9,061
Salt ..	20,620	11,490	..	9,130
Wines, liquors and beers ..	19,881	6,241	..	13,640
Merchandise not enumerated ..	602,001	617,245	15,244	..
<b>Total, Class No. 4.....</b>	<b>1,218,525</b>	<b>1,096,111</b>	<b>35,191</b>	<b>157,605</b>
<i>Class No. 5.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Pulpwood ..	1,017,993	910,774	..	107,219
Sawed lumber ..	470,400	487,709	17,309	..
Squared timber ..	24,369	37,844	13,475	..
Shingles ..	3,288	9,229	5,941	..
Other woods ..	105,917	49,222	..	56,695
<b>Total, Class No. 5.....</b>	<b>1,621,967</b>	<b>1,494,778</b>	<b>36,725</b>	<b>163,914</b>

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TABLE 4—Comparative Statement of all the Canals for the years ending December 31, 1914 and 1915.—*Concluded.*

Articles.	1914.		1915.		Increase.	Decrease.
	Tons.	Tons.	Tons.	Tons.		
Class No. 6.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Hard coal	1,176,567	780,629			395,938	
Soft coal	3,561,754	1,988,531			1,573,223	
Coke	20	324			304	
Copper ore	2,887	20,331			17,444	
Iron ore	20,917,633	4,133,360			16,784,273	
Other ore	33,054	29,518			3,536	
Sand, etc.	512,281	461,407			50,874	
Total, Class No. 6	26,204,196	7,414,100			17,748	18,807,844
Grand total	37,023,237	15,198,803			99,945	21,924,379

Net decrease, 21,824,434 tons.

TABLE 5.—Statement of Traffic on the undermentioned canals during the Season of Navigation in 1915.

Articles.	Sault Ste. Marie.	St. Welland.	St. Lawrence.	St. Chambly.	St. Peters.	Ottawa.	Rideau.	Trent Valley.	St. Andrews.
	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons
<i>Class No. 1.—Vessels.</i>									
Canadian vessels, steam	2,995,643	1,806,310	2,640,861	45,103	3,715	108,859	158,563	114,937	131,447
“ “ sail	45,360	226,038	782,130	13,895	1,935	15,647	138,571	29,850	38,393
United States vessels, steam	5,442,807	794,208	741,681	19	1,407	1,407	39,464	586	53,108
“ “ sail	1,005	28,549	100,111	235,174	...	...	...	...	...
Total, Class No. 1	8,484,815	2,855,195	4,261,783	294,191	5,650	125,913	336,898	145,376	172,780
<i>Class No. 2.</i>									
Passengers	No.	No.	No.	No.	No.	No.	No.	No.	No.
	25,047	7	78,303	2,640	8	12,223	27,258	18,664	82,301
<i>Class No. 3.</i>									
Barley	109,552	26,231	25,761	26	1	...	19	...	...
Buckwheat	...	...	10	...	...	...	2	...	...
Corn	4,695	121,086	37,567	123	...	...	20	...	...
Oats	314,409	169,046	152,107	707	...	...	571	...	...
Rye	11,853	...	...	...	...	...	...	...	...
Flax	36,822	12,621	10,317	...	...	...	...	...	...
Peas	1,902,706	955,181	947,925	90	...	...	33	...	...
Wheat	275,404	15,117	18,181	54	1	...	91	...	...
Flour	20	...	4,672	1,074	...	...	470	...	...
Hay	233	5,152	2,042	3,542	23	...	1,172	...	...
Other mill products	25	1,526	5,374	212	32	...	788	...	...
Fruit and vegetables	65	...	531	1,149	25	...	3	...	...
Potatoes	...	...	443	153	10	...	119	...	...
Live stock	473	1	53	31	1	...	171	1	...
Poultry, game and fish	...	...	32	15	...	...	...	...	...
Dressed meats	...	...	518	548	2	...	52	5	...
Other packing house products	...	...	8	13	7	...	...	...	...
Hides and leather	182	...	...	...	...	...	265	1	...
Wool	...	...	3,631	24	...	...	16	14	...
All other animal products	...	...	...	...	6	...	150	192	...
Total, Class No. 3	2,656,444	1,306,804	1,209,208	7,947	391	421	7,091	3,211	2,289

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Class No. 4.	Class No. 5.	Class No. 6.
Agricultural implements	10,496	180
Cement, bricks, lime	10,168	401
Household goods and furniture	20	26
Iron, pig and bloom	1,556	194
Iron and steel, all other	7,000	78
Petroleum and other oils	39,039	440
Sugar	71,648	207
Salt	30,108	1,748
Wines, liquors and beers	142	2
Merchandise not enumerated	1,406	4
Total, Class No. 4	306,304	115,998
	150,415	17,661
	320,442	276,713
	441,293	21,605
		322
		6,323
		16,089
		10,186
		2,751
		1,7
Agricultural implements	164	77
Cement, bricks, lime	19,451	1,051
Household goods and furniture	20	3
Iron, pig and bloom	1,556	264
Iron and steel, all other	7,000	518
Petroleum and other oils	38,735	427
Sugar	61,248	105
Salt	25,655	5
Wines, liquors and beers	2,250	425
Merchandise not enumerated	1,406	8
Total, Class No. 4	306,304	115,998
	150,415	17,661
	320,442	276,713
	441,293	21,605
		322
		6,323
		16,089
		10,186
		2,751
		1,7
Pulpwood	26,100	278,156
Sawed lumber	46,035	440,323
Square timber	4,650	146,655
Shingles	8,916	7,167
Other woods	3,517	3,230
Total, Class No. 5	89,218	601,255
	308,660	280,117
		179
		136,140
		18,408
		13
		45
		1,108
		1,607
		27,586
		105
		1,607
		27,586
		10,211
		44,575
		4,894
Hard coal	54,127	363,944
Soft coal	426,054	695,880
Coke		825,512
Copper ore	20,331	60
Iron ore	4,046,705	27,291
Other ore	6,662	9,402
Sand, etc.	10,123	22,048
Total, Class No. 6	4,564,002	1,125,106
	7,750,957	3,061,012
		3,409,467
		1,322,291
		169,038
		2,003
		23,781
		93,521
		97,173
		289
		97,173
		272,370
		30,728
		2,895
		120,781
		49,901
		21,982

Summary Statement of Traffic on the Undermentioned Canals during the Season of Navigation 1915, showing the total quantity of property passed through.

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Flax.....	36,822	12,624	10,317	8	2	33	91	1	1,764
Peas.....		840	90	54	1	1	470	82	34
Wheat.....	1,902,706	955,181	947,925	18,181	1,074	23	1,172	393	23
Flour.....	275,404	15,117	4,672	3,542	52	25	785	429	104
Hay.....	20		2,042	212	10	149	536	91	16
Other.mill products	233	5,152	5,374	1,149	171	1	500	...	22
Fruit and vegetables	27	1,526	531	186					
Potatoes.....	68								
<b>Total</b>	<b>2,655,789</b>	<b>1,306,803</b>	<b>1,204,523</b>	<b>7,163</b>	<b>381</b>	<b>153</b>	<b>4,202</b>	<b>1,521</b>	<b>1,990</b>
<i>Manufactures.</i>									
Agricultural implements.....	10,496	10,496	164	180	26	138	77	19	
Cement, bricks and lime	3,469	10,168	19,451	404	1,051	257	257	170	
Household goods and furniture	5	20	1,556	194	264	62	54	54	
Iron, pig and bloom.....	14,538	7,000	8,362	78	3	518	417	5	
Iron, steel, all other	95,110	39,039	38,735	440	21	427	681	83	
Petroleum and other oils	700	71,648	61,248	207	5	558	469	42	
Sugar.....	3,070	30,108	25,655	1,748	4	465	500	2	
Salt.....	7,270	142	2,250	660	5	532	606	2	
Wines, liquors and beers	331	1,406	3,294	33	5	588	445	2	
Merchandise not enumerated	306,304	150,415	115,998	17,661	255	11,528	6,672	2,376	
<b>Total</b>	<b>441,293</b>	<b>320,442</b>	<b>276,713</b>	<b>21,605</b>	<b>322</b>	<b>6,523</b>	<b>16,089</b>	<b>10,186</b>	<b>187</b>
<i>Produce of Mines.</i>									
Hard coal.....	54,127	239,944	363,669	113,988	1,185	1,037	6,398	116	
Soft coal.....	426,054	69,880	825,512	60	1,601	36,229	1,116	136	
Coke.....				263		1			
Copper ore.....	20,331	27,291	9,402	49,962					
Iron ore.....	4,046,705	22,048	185						
Other ore.....	6,662	139,943	123,463	4,825					
Sand, etc.,	10,123								
<b>Total</b>	<b>4,564,002</b>	<b>1,125,106</b>	<b>1,322,291</b>	<b>169,038</b>	<b>2,003</b>	<b>23,781</b>	<b>93,521</b>	<b>97,173</b>	<b>289</b>
Grand totals(passengers and tonnage of vessels not included)	7,750,957	3,061,012	3,409,467	478,707	2,895	30,728	120,781	49,904	21,982

TABLE 7 (No. 1).—General Statement showing the Quantity of each Article Transported on the Sault Ste. Marie canal during the Season of Navigation in 1915.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to Canadian Ports.		From United States to Canadian Ports.		Total Tons.		Origin of Cargo.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Canadian	U. S.
Agricultural implements...												
Barley...	10,480	16	53,571		5,145		49,576		10,480	16	10,496	49,576
Cement, bricks, etc...	2,991										59,976	
Coal, hard...											3,469	
“ soft...	1,325										54,127	
Corn...											426,054	
Flax...											4,695	
Flour...											36,822	
Fruits and vegetables...											275,404	
Hay...	20										275	
Household goods...											27	
Iron, pig and bloom...	5,058	2,000									20	
Iron and steel, all other...	13,904	17,823									20	
Merchandise...	241,843		11,865		5,636		6,214		53,369	30	9,480	
Oats...			7,328		19,350		16,222		1,030		71,192	
Other mill products...			2,87,914		4,267		21,997				237,088	
“ woods...	50		233		2,192						314,409	
Ore, all other...	120		1,275		6,542						314,409	
“ copper...											314,409	
“ iron...											314,409	
Petroleum...	700		468								314,409	
Poultry, game and fish...	5		36		32						314,409	
Potatoes...											314,409	
Pulpwood...											314,409	
Rye...											314,409	
Sawed lumber...											314,409	
Shingles...											314,409	
Square timber...											314,409	
Sugar...											314,409	
Salt...											314,409	
Sand and stone...											314,409	
Wheat...											314,409	
Wines, liquors and beer...											314,409	
Wool...											314,409	
Total freight...	257,474	1,614,502		14,957	4,691,580		333,705	49,972	812,240	6,938,708	7,750,957	5,189,223

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TABLE 7 (No. 2).—General Statement showing the Quantity of each Article Transported on the Welland canal during the Season of Navigation in 1915.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to Canadian Ports.		From United States to Canadian Ports.		Total Tons.		(Origin of Cargo.)	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Canadian.	U. S.		
Agricultural implement												
Barley	10,480	16	25,541				10,480	16	10,496	786		
Cement, bricks, etc.	10,168						26,231	26,231	25,445			
Coal, hard							10,168	10,168	10,168			
“ soft							239,944	239,944	239,944			
Corn							695,880	695,880	695,880			
Flax							121,086	121,086	121,086			
Flour	30						12,624	12,624	12,624			
Fruits and vegetables							12,624	12,624	12,624			
Household goods	20						15,117	15,117	15,117			
Iron, pig and bloom	4,225	2,550	2,907				10,993	10,993	10,993			
Iron and steel, all other	14,576	2,997	2,887				1,520	1,520	1,520			
Merchandise	58,297		161,442				1,520	1,520	1,520			
Oats	170						20	20	20			
Other mill products							20	20	20			
“ woods							2,775	2,775	2,775			
Ore, all other	60	5,625	1,197				14,576	14,576	14,576			
“ iron	60	1,098					135,811	135,811	135,811			
Peas							3,977	3,977	3,977			
Petroleum							11,715	11,715	11,715			
Poultry, game and fish							54,848	54,848	54,848			
Pulpwood	70,705						11,976	11,976	11,976			
Sawed lumber							2,996	2,996	2,996			
Square timber							1,135	1,135	1,135			
Sugar	9,610	4,650	4,563				207,451	207,451	207,451			
Salt		18,250	142				1,135	1,135	1,135			
Sand and stone		771,672	7,737				2,519	2,519	2,519			
Wheat	1,440						1,135	1,135	1,135			
Wines, liquors and beers	839						15,705	15,705	15,705			
Total freight	180,710	1,105,813	242,286				329,449	329,449	329,449			
							2,519	2,519	2,519			
							156,167	156,167	156,167			
							4,015	4,015	4,015			
							756,440	756,440	756,440			
							2,304,552	2,304,552	2,304,552			
							3,061,012	3,061,012	3,061,012			
							1,426,256	1,426,256	1,426,256			
							1,634,756	1,634,756	1,634,756			

Through Article 7(No. 3), General Statement showing the Quality of each Import Article during the Season of Navigation in 1915.

Articles	From Canadian to Canadian Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Total Tons.		Origin of Cargo.
	Up	Down.	Up	Down.	Up	Down.	Up	Down.	
Agricultural implements	10,480	100	10	16	10,496	10	786	786	
Barley	25,541	26,231	26,231	25,445	25,445	25,445			
Cement, bricks, etc.	10,168	10,168	10,168	10,168	10,168	10,168			
Coal, hard	239,911	239,911	239,911	239,911	239,911	239,911			
" soft							679,276	679,276	
Corn	600	600	600	600	600	600	121,086	121,086	
Flax	20,825	20,825	20,825	20,825	20,825	20,825	12,624	12,624	
Flour	30	30	30	30	30	30	15,087	15,087	
Fruits and vegetables	6	6	6	6	6	6	1,520	1,520	
Household goods	20	20	20	20	20	20	2,775	2,775	
Iron, pig and bloom	1,225	1,225	1,225	1,225	1,225	1,225	14,576	14,576	
Iron and steel, all other	11,576	11,576	11,576	11,576	11,576	11,576	24,463	24,463	
Merchandise	58,297	58,297	58,297	58,297	58,297	58,297	14,590	14,590	
Dates	170	170	170	170	170	170	168,876	168,876	
Other mill products							169,016	169,016	
" wood							5,152	5,152	
Core, all other	100	100	100	100	100	100	3,230	3,230	
" iron.	60	60	60	60	60	60	2,310	2,310	
Peas	840	840	840	840	840	840	4,815	4,815	
Petroleum	10,541	10,541	10,541	10,541	10,541	10,541	16	16	
Pulpwood	207,451	207,451	207,451	207,451	207,451	207,451	1,135	1,135	
Sawed lumber	2,519	2,519	2,519	2,519	2,519	2,519	20,108	20,108	
Square timber	1,135	1,135	1,135	1,135	1,135	1,135	21,243	21,243	
Sugar	4,650	4,650	4,650	4,650	4,650	4,650	6,031	6,031	
Salt	4,563	4,563	4,563	4,563	4,563	4,563	4,763	4,763	
Sand and stone	1,422	1,422	1,422	1,422	1,422	1,422	1,142	1,142	
Wheat	350	350	350	350	350	350	2,100	2,100	
Wines, liquors and beers	839	839	839	839	839	839	955,181	955,181	
Total freight.	110,005	110,005	110,005	110,005	110,005	110,005	2,519	2,519	
	2,155,301	2,155,301	2,155,301	2,155,301	2,155,301	2,155,301	685,755	685,755	
	1,015	1,015	1,015	1,015	1,015	1,015	329,149	329,149	

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TABLE 7 (No. 4).—General Statement showing the Quantity of each Way Article Transported on the Welland canal during the Season of Navigation in 1915.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to Canadian Ports.		Total Tons.		Origin of Cargo. Canadian, U. S.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	
Coal, soft							16,604	16,574	
Merchandise							30	30	
Ore, all other							14	14	
Poultry, game and fish							1,000	1,000	
Pulpwood	70,705						1,000	1,000	
Sand and stone		17,900					1	1	
Total freight	70,705	18,986					70,705	70,705	
							131,629	131,629	
							113,729	113,729	
							130,262	130,262	
							70,705	70,705	
							149,248	149,248	
							219,953	219,953	
							89,650	89,650	
							130,303	130,303	

## DEPARTMENT OF RAILWAYS AND CANALS

TABLE 7 (No. 5).- General Statement showing the Quantity of each Article Transported on the St. Lawrence canals during the Season of Navigation in 1915.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Total Tons.		Origin of Cargo.	
	Up	Down	Up	Down	Up	Down	Up	Down	Up	Down	Canadian	U. S.
Agricultural implements	153	11			153	11	164		164		3,631	96
All other animals...	732	2	899		732	2	899		2,899		25,665	25,665
Barley...	19	3	25,742		19	7	25,742		25,742		18,565	18,565
Buckwheat	2	2	2,409				17,042	2	19,451		362,864	362,864
Cement, bricks, etc.	17,042	2	72				362,681	2	362,681		688,451	688,451
Cow, hard	981		940				136,523		136,523		137,061	137,061
" soft...	1,66,523		60				688,049		688,049		60	60
Coke...	24		21,382				13,161	24	37,543		37,567	37,567
Corn...	14	18	10,317				14	11	10,317		31	37,536
Dressed meats			16,571						16,571		18,181	18,181
Flax...			5,091						5,091		5,374	5,374
Flour...	1,610		283						1,610		10,317	10,317
Fruits and vegetables	3,574		1,098						1,098		18,181	18,181
Hay...												
Hides and leather												
Household goods												
Iron, pig and bloom												
Iron and steel, all other												
Live stock												
Merchandise												
Oats...												
Other mill products												
" packing house products.												
Woods												
Ore, all other												
" iron...												
Peas...												
Petroleum												
Poultry, game and fish												
Potatoes												
Pulpwood												
Shawed lumber												
Shingles												
Square timber												
Sugar...												
Salt...												
Sand and stone												
Wheat												
Wines, liquors and beers												
Total freight ..	421,377	1,324,318	401,241	4	42	405	1,874	1,260,203	824,537	2,584,930	3,409,467	2,024,755

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TABLE 7 (No. 6).—General Statement showing the Quantity of each Through Article Transported on the St. Lawrence Canals during the Season of Navigation in 1915.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to Canadian Ports.		From United States Ports.		Total Tons.	Origin of Cargo.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
	Canadian.	U. S.	Canadian.	U. S.	Canadian.	U. S.	Canadian.	U. S.		
Agricultural implements	1	...	...	...	1	...	1	...	1	...
All other animals...	50	314	...	...	50	314	364	...	96	...
Barley	25,108	1	25,108	1	25,108	1	25,012	10,230	...	...
Cement, bricks, etc.	10,229	...	...	...	10,229	...	10,229	...	...	...
Coal, hard	7,661	5,482	7,661	5,482	7,661	5,482	355,465	355,465	355,465	355,465
“ soft	...	10,317	...	10,317	...	670,356	670,356	670,356	670,356	670,356
Corn	7,661	4,619	7,661	4,619	7,661	4,619	18,643	18,643	18,643	18,643
Flax	30	10,295	30	10,295	30	10,295	10,317	10,317	...	...
Flour	...	4,619	...	4,619	...	4,619	4,619	4,619	4,619	4,619
Fruits and vegetables	...	150	...	150	...	150	150	150	150	150
Hay	4	713	4	713	4	713	4	713	4	713
Hides and leather	257	2,862	257	2,862	257	2,862	1,196	1,196	970	970
Household goods	1,196	3,343	1,196	3,343	1,196	3,343	8,786	8,786	4,058	4,058
Iron, pig and bloom	8,786	6	8,786	6	8,786	6	12,581	12,581	12,173	12,173
Iron and steel, all other	...	...	...	...	...	...	...	...	...	...
Live stock	39,940	32,281	39,940	32,281	39,940	32,281	65,340	65,340	6	6
Merchandise	...	148,526	...	148,526	...	148,526	2,549	2,549	151,075	151,075
Oats...	...	...	...	...	...	...	...	...	...	...
Other packing house products	...	264	...	264	...	264	264	264	264	264
“ woods	...	775	...	775	...	775	775	775	775	775
Ore, all other	...	125	...	125	...	125	125	125	125	125
“ iron	...	42,292	...	42,292	...	42,292	9,342	9,342	42,292	42,292
Petroleum	71,857	366,873	71,857	366,873	71,857	366,873	3,103	3,103	438,730	438,730
Pulpwood	2,264	834	2,264	834	2,264	834	4,650	4,650	3,103	3,103
Sawed lumber	...	4,650	...	4,650	...	4,650	2,778	2,778	4,650	4,650
Square timber	20,647	2,778	20,647	2,778	20,647	2,778	23,425	23,425	23,425	23,425
Sugar	32	142	32	142	32	142	174	174	174	174
Salt	1,440	766,273	1,440	766,273	1,440	766,273	925,201	925,201	694,786	694,786
Wheat	2,163	8,134	2,163	8,134	2,163	8,134	158,928	158,928	2,344	2,344
Wines, liquors and beers	...	181	...	181	...	181	181	181	181	181
Total freight.	166,560	1,061,502	401,241	567,759	2,297,261	567,759	2,297,261	2,297,261	1,536,755	1,536,755

## DEPARTMENT OF RAILWAYS AND CANALS

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TABLE 7 (No. 7). General Statement showing the Quantity of each Way Article Transported on the St. Lawrence Canal during the Season of Navigation in 1915.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to Canadian Ports.		From United States to Canadian Ports.		Origin of Cargo.	
	Up	Down	Up	Down	Up	Down	Up	Down	Total Ton.	Total Ton.
	Canadian	Canadian	Canadian	Canadian	Canadian	Canadian	Canadian	Canadian	Canadian	Canadian
Agricultural implements	153	10	163	10	163	163	163	163	3,267	3,267
All other animals	682	2,585	682	2,585	631	653	631	653	3,631	3,631
Barley	19	634	19	634	19	10	19	10	2,585	2,585
Buckwheat	2	3	2	3	2	2	2	2	631	631
Cement, bricks, etc.	6,813	2,408	6,813	2,408	7	2,408	7	2,408	631	631
Coal, hard	981	72	981	72	981	981	981	981	72	72
" soft	128,859	940	128,859	940	128,859	128,859	128,859	128,859	72	72
Coke		60		60		60		60	72	72
Corn	24	18,900	24	18,900	24	18,900	24	18,900	18,899	18,899
Dressed meat	14	18	14	18	14	1	14	1	32	32
Flour	1,580	6,276	1,580	6,276	1,580	6,276	1,580	6,276	7,856	7,856
Fruits and vegetables	283	472	283	472	283	172	283	172	755	755
Hay	3,574	948	3,574	948	3,574	948	3,574	948	1,522	1,522
Hides and leather		3		3		1		1	4	4
Household goods	316	255	316	255	327	259	316	259	581	581
Iron, pig and bloom	2,862	1,440	2,862	1,440	2,861	1,440	2,861	1,440	1,122	1,122
Iron and steel, all other	8,403	8,965	8,403	8,965	8,403	8,965	8,403	8,965	17,368	17,368
Live stock	98	333	98	333	101	336	101	336	437	437
Merchandise	7,861	8,621	7,861	8,621	8,621	8,621	8,621	8,621	15,772	15,772
Oats	77	955	77	955	77	955	77	955	1,032	1,032
Other mill products	716	1,326	716	1,326	716	1,326	716	1,326	2,042	2,042
" packing house products										
" woods	184	70	184	70	184	70	184	70	254	254
" all other	2,969	3,353	2,969	3,353	2,969	3,353	2,969	3,353	6,322	6,322
" iron		60		60		60		60	60	60
Peas	4	32	4	32	4	32	4	32	36	36
Petroleum	711	1,525	711	1,525	711	1,525	711	1,525	2,236	2,236
Poultry, game and fish		51		51		51		51	531	531
Potatoes	89	449	89	449	82	449	82	449	529	529
Pulpwood	1,392	201	1,392	201	1,392	201	1,392	201	1,593	1,593
Sawed lumber	20,474	123,078	20,474	123,078	20,474	123,078	20,474	123,078	14,552	14,552
Shingles		13		13		13		13	13	13
Square timber	1,144	1,373	1,144	1,373	1,144	1,373	1,144	1,373	2,517	2,517
Sugar	2,007	223	2,007	223	2,007	223	2,007	223	1,149	1,149
Salt	1,436	640	1,436	640	1,436	640	1,436	640	3,076	3,076
Sand and stone	47,396	76,067	47,396	76,067	47,396	76,067	47,396	76,067	1,758	1,758
Wheat	12,785	365	12,785	365	12,785	365	12,785	365	1,024	1,024
Wines, liquors and beers	918	32	918	32	918	32	918	32	950	950
Total freight	254,817	262,816	254,817	262,816	254,817	262,816	254,817	262,816	287,636	287,636
	42	405	42	405	42	405	42	405	42	42

TABLE 7 (No. 8).—General Statement showing the Quantity of each Article Transported on the Champlain Canal during the Season of Navigation in 1915.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to Canadian Ports.		From United States to Canadian Ports.		Total Tons.		Origin of (Cargo). Canadian. U. S.
	Up	Down.	Up	Down.	Up	Down.	Up	Down.	168	12	
	Up	Down.	Up	Down.	Up	Down.	Up	Down.	168	12	
Agricultural implements	168	12	168	12	168	12	168	12	180	24	
All other animals.	9	15	15	15	15	9	21	21	21	21	
Barley	15	13	13	13	15	8	26	26	26	26	
Cement, bricks, etc	391	73	391	73	391	13	404	73	404	404	
Coal, hard	73	26	73	26	73	13	113, 915	113, 915	113, 915	113, 915	
Coke	113	26	113	26	113	915	113, 988	113, 988	113, 988	113, 988	
Corn	118	5	118	5	118	5	123	5	123	123	
Dressed meats	10	5	10	5	10	5	15	5	15	15	
Flour	1,045	29	1,045	29	1,045	29	1,074	29	1,074	1,074	
Fruits and vegetables	318	831	318	831	318	831	318	831	1,149	1,149	
Hay	26	3,356	26	3,356	26	3,356	26	3,356	3,542	3,542	
Hides and leather	13	51	13	51	13	51	13	51	13	13	
Household goods	143	78	143	78	143	51	194	51	194	194	
Iron, pig and bloom	78	49	78	49	78	49	78	49	78	78	
Iron and steel, all other	391	150	391	150	391	49	391	49	440	440	
Live stock	3	532	3	532	3	532	3	532	153	153	
Merchandise	438	652	438	652	438	652	438	652	17, 661	2, 158	
Oats	55	41	55	41	55	41	55	41	707	707	
Other mill products	171	41	171	41	171	41	171	41	212	212	
“ packing house products	109	439	109	439	109	439	109	439	548	548	
“ woods	30	153	30	153	30	153	30	153	30	153	
Ore, iron	58	32	58	32	58	32	58	32	49, 962	49, 962	
Peas	207	25	207	25	207	25	207	25	207	207	
Petroleum	133	53	133	53	133	53	133	53	31	31	
Poultry, game and fish	317	111	317	111	317	111	317	111	151, 316	151, 316	
Potatoes	111	111	111	111	111	111	111	111	127, 531	127, 531	
Pulpwood	151, 316	127, 214	151, 316	127, 214	151, 316	127, 214	151, 316	127, 214	976	976	
Sawed lumber	163	4	163	4	163	4	163	4	1, 585	1, 585	
Shingles	488	1	488	1	488	1	488	1	1, 172	1, 172	
Square timber	470	15	470	15	470	15	470	15	660	660	
Sugar	39	1	39	1	39	1	39	1	1, 905	1, 905	
Salt	32	1	32	1	32	1	32	1	32	32	
Sand and stone	32	1	32	1	32	1	32	1	32	32	
Wheat	32	1	32	1	32	1	32	1	32	32	
Wines, liquors and beers	5, 648	6, 325	5, 648	6, 325	5, 648	6, 325	5, 648	6, 325	192, 841	192, 841	
Total freight									178, 707	178, 707	
									292, 191	292, 191	
									186, 516	186, 516	

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The Quantity of each Article Transported on the St. Peter's Canal during the Season of Navigation in 1915.

Articles.	From Canadian to Canadian Ports.		From United States to Canadian Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Total Tons.		(Origin of Cargo).
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	
Bailey	1										
Cement, bricks, etc.											
Coal, soft											
Flour											
Fruits and vegetables											
Hay											
Iron and steel, all other											
Livestock											
Merchandise											
Oats											
Other mill products											
Pickling house products											
Petroleum											
Poultry, game and fish											
Potatoes											
Sawed lumber											
Sugar											
Salt											
Wheat											
Total freight	491	491	2,404	2,404	2,895	2,895	2,404	2,404	2,895	2,895	

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the Quantity of each Article Transported on the Murray Canal during the Season of Navigation in 1915.

# DEPARTMENT OF RAILWAYS AND CANALS

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TABLE 7 (No. 12). General Statement showing the Quantity of each Article Transported on the Rideau Canal during the Season of Navigation in 1915.

Articles.	From Canadian to Canadian Ports.				From Canadian to United States Ports.				From United States to Canadian Ports.				Origin of Cargo.			
	Up.		Down.		Up.		Down.		Up.		Down.		Up.		Down.	
	Canadian	United States Ports.	Canadian	United States Ports.	Canadian	United States Ports.	Canadian	United States Ports.	Canadian	United States Ports.	Canadian	United States Ports.	Canadian	United States Ports.	Canadian	United States Ports.
Agricultural implements	14								14				77			
All other animals	589	882	25	232					589	582	25	232	1,471			
Cement, bricks, etc.	25												257			
Coal, hard	1												59			
" soft	1,055	6											1,057			
Coke	1												1			
Corn			36	7									36			
Dressed meats													36			
Flax													14			
Flour	6	76	70	17									14			
Fruits and vegetables	21		1										8			
Hay	376		376										82			
Hides and leather	3		1										82			
Household goods	36		26										91			
Iron, pig and bloom	401		16										91			
Iron and steel, all other	640		32										91			
Live stock	3												393			
Merchandise	3,673		2,909										393			
Oats	30	444	272										4			
Other mill products	157												62			
Packing house products													417			
Woods	1,360	49	247										681			
Ore, all other	461		125										3			
Peas	2												6,672			
Petroleum	225		244										480			
Poultry, game and fish	2		3										429			
Pulpwood	11												192			
Sawed lumber	2,126		6,229										1,582			
Shingles	43	2											25			
Square timber	190	3											586			
Sugar	343	157											2			
Salt	401	205											469			
Sand and stone	60,475	25,597	420	25									5			
Wines, liquors and beers	420	1											5			
Wool													11			
Total freight	72,852	41,410											355			
													355			
													45			
													193			
													500			
													606			
													59,072			
													445			
													1			
													1			
													114,357			
													120,781			
													17,504			
													72,977			
													125			

TABLE 7 (No. 13).—General Statement showing the Quantity of each Article Transported on the Trent Valley Canals during the Season of Navigation in 1915.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to Canadian Ports.		From United States to Canadian Ports.		("Canadian to U. S.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.
Agricultural implements	16	3	3	...	...	...	16	3	19	...
All other animals	15	37	...	...	...	...	15	52	52	...
Cement, bricks, etc	161	9	7	...	...	...	161	9	170	...
Coal, hard	109	7	38	...	...	...	109	7	116	...
" soft	98	1	1	...	...	...	98	3	126	...
Dressed meats	1	6	1	...	...	...	1	1	126	...
Flour	25	1	1	...	...	...	28	6	34	...
Fruits and vegetables	15	7	7	...	...	...	15	1	34	...
Hay	16	1	1	...	...	...	16	1	34	...
Household goods	53	1	1	...	...	...	53	1	34	...
Iron, pig and bloom	5	5	5	...	...	...	5	5	5	...
Iron and steel, all other	83	45	45	...	...	...	83	45	83	...
Live stock	198	1,002	1,002	...	...	...	198	45	243	...
Merchandise	1,374	2	2	...	...	...	1,374	1,002	2,376	...
Oats	92	12	12	...	...	...	92	12	104	...
Other mill products	...	2	2	...	...	...	...	2	2	...
" packing house products	7,661	19,925	19,925	...	...	...	7,661	19,925	27,586	...
" woods	37	42	42	...	...	...	37	42	42	...
Ore, all other	...	...	...	...	...	...	...	...	...	...
Petroleum	...	...	...	...	...	...	...	...	...	...
Potatoes	9	13	13	...	...	...	9	13	14	...
Pulpwood	126	14,742	14,742	...	...	...	126	14,742	22	...
Rye	25	638	638	...	...	...	25	25	25	...
Sawed lumber	933	41	41	...	...	...	933	41	1,571	...
Shingles	90	290	290	...	...	...	90	41	131	...
Square timber	129	2	2	...	...	...	129	2	419	...
Salt	2	1,764	1,764	...	...	...	2	1,764	1,764	...
Wheat	...	...	...	...	...	...	...	...	...	...
Total freight	...	13,083	36,821	...	...	...	13,083	36,821	49,904	49,904

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TABLE 7 (No. 14).—General Statement showing the Quantity of each Article Transported on the St. Andrew's Canal during the Season of Navigation in 1915.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to Canadian Ports.		From United States to Canadian Ports.		Tons.		Origin of Cargo. Canadian. U. S.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Total Tons.		
All other animals.	2	...	...	...	...	...	...	...	2	...	...
Coal, hard.	165	...	172	...	165	...	165	...	165	...	...
Merchandise.	15	...	10	...	15	...	15	...	15	...	...
Other woods.	4,884	...	3	...	4,884	...	4,894	...	4,894	...	...
Poultry, game and fish	3	...	...	...	3	...	3	...	3	...	...
Sand and stone.	16,731	...	...	...	16,731	...	16,731	...	16,731	...	...
Total freight.	21,800	182	...	...	...	...	21,982	182	21,982	21,982	...

TABLE 8.—STATEMENT showing the Classified Tonnage of all Kinds of Vessels,  
SAULT STE.

## CANADIAN.

Class.	Steam Vessels.	No.	Tonnage.	Class.	Sailing Vessels.	No.	Tonnage.
1	5,000 to 5,704	1	5,704	1	5,000 to		
2	4,000 " 5,000.....	3	13,550	2	4,000 " 5,000...		
3	3,000 " 4,000.....	4	13,550	3	3,000 " 4,000.....		
4	2,000 " 3,000.....	14	30,600	4	2,000 " 3,000.....	1	2,132
5	1,000 " 2,000.....	63	83,350	5	1,000 " 2,000.....		
6	Under 1,000.....	71	11,820	6	Under 1,000.....	34	6,230
	Total.....	156	158,574		Total.....	35	8,362

## WELLAND

1	250 to 1,905	107	118,209	1	250 to 1,951.....	28	20,751
2	200 " 249.....	3	600	2	200 " 249.....	4	800
3	150 " 199.....	1	150	3	150 " 199.....	6	900
4	100 " 149.....	2	225	4	100 " 149.....	6	600
5	50 " 99.....	6	500	5	50 " 99.....	4	230
6	Under 50.....	37	1,085	6	Under 50.....	1	40
	Total	156	120,769		Total.....	49	23,321

## ST. LAWRENCE

1	250 to 1,629...	113	110,248	1	250 to 1,226.....	101	48,975
2	200 " 249...	3	640	2	200 " 249.....	20	4,130
3	150 " 199.....	8	1,310	3	150 " 199.....	44	6,530
4	100 " 149.....	12	1,420	4	100 " 149.....	61	7,300
5	50 " 99.....	23	1,505	5	50 " 99.....	44	3,330
6	Under 50.....	33	940	6	Under 50.....	9	205
	Total	192	116,063		Total.....	279	70,470

## RIDEAU, OTTAWA

1	250 to 370.....	5	950	1	250 to.....	3	750
2	200 " 249			2	200 " 249.....	4	800
3	150 " 199.....	5	820	3	150 " 199.....	29	4,860
4	100 " 149.....	6	730	4	100 " 149.....	35	4,120
5	50 " 99.....	14	770	5	50 " 99.....	21	1,500
6	Under 50.....	42	810	6	Under 50.....	18	385
	Total	70	4,080		Total.....	110	12,415

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passed through the following Canals, during the Season of Navigation in 1915.

## MARIE CANAL

## UNITED STATES.

Class.	Steam Vessels.	No	Tonnage.	Class.	Sailing Vessels.	No.	Tonnage.
1	5,000 to 6,498.....	69	375,548	1	5,000 to .....	1	.....
2	4,000 " 5,000.....	69	321,100	2	4,000 " 5,000..	1	.....
3	3,000 " 4,000.....	90	312,650	3	3,000 " 4,000.....	1	3,200
4	2,000 " 3,000.....	31	82,350	4	2,000 " 3,000	1	2,350
5	1,000 " 2,000.....	25	41,250	5	1,000 " 2,000	1	.....
6	Under 1,000.....	28	9,180	6	Under 1,000	1	50
Total.....		312	1,142,078	Total.....		3	5,600

## CANAL.

1	250 to 2,146.....	67	76,721	1	250 to 1,953	5	5,328
2	200 " 249.....	0	.....	2	200 " 249.....	2	450
3	150 " 199.....	3	500	3	150 " 199.....	2	300
4	100 " 149.....	1	100	4	100 " 149.....	2	200
5	50 " 99.....	7	470	5	50 " 99.....	1	60
6	Under 50.....	25	430	6	Under 50.....	6	120
Total.....		103	78,221	Total.....		18	6,458

## CANALS.

1	250 to 1,836 .....	45	47,933	1	250 to 400.....	7	2,490
2	200 " 249.....	2	480	2	200 " 249.....	1	200
3	150 " 199.....	1	170	3	150 " 199.....	3	500
4	100 " 149.....	3	390	4	100 " 149.....	46	5,190
5	50 " 99.....	4	295	5	50 " 99.....	117	10,520
6	Under 50.....	4	75	6	Under 50.....	9	175
Total.....		59	49,343	Total.....		183	19,075

## AND CHAMBLY CANALS.

1	250 to .....			1	250 to .....		
2	200 " 249.....			2	200 " 249....		
3	150 " 199.....			3	150 " 199.....	5	810
4	100 " 149.....			4	100 " 149.....	128	14,020
5	50 " 99.....			5	50 " 99.....	317	29,955
6	Under 50.....			6	Under 50..	2	90
Total .....				Total .....		452	44,875



## APPENDIX

# DOMINION CANALS

The canal systems of the Dominion, under government control in connection with lakes and navigable rivers, are as follows:—

*First—The through route between Montreal and the head of Lake Superior (14 feet minimum depth of water.)*

	Miles.
1. Lachine canal.....	$8\frac{1}{2}$
Lake St. Louis and river St. Lawrence.....	16
2. Soulanges canal.....	14
Lake St. Francis and river St. Lawrence.....	31
3. Cornwall canal.....	$11\frac{1}{4}$
River St. Lawrence.....	5
4. Farran's Point canal.....	$1\frac{1}{2}$
River St. Lawrence.....	$9\frac{1}{2}$
5. Rapide Plat canal.....	$3\frac{3}{8}$
River St. Lawrence.....	4
6. Galops canal.....	$7\frac{1}{3}$
River St. Lawrence and lake Ontario.....	228
7. Welland canal.....	$26\frac{3}{4}$
Lake Erie, Detroit river, lake St. Clair, lake Huron, etc.....	574
8. Sault Ste. Marie canal.....	$1\frac{1}{4}$
Lake Superior to Port Arthur.....	272
	<hr/>
Total.....	$1,214$
	<hr/>
To Duluth.....	$1,336$
Chicago.....	$1,240$
	<hr/>

*Second.—Ottawa to lake Champlain.*

1. Grenville. 2. Carillon. 3. St. Anne's. 4. Chambly. 5. St. Ours canals.

*Third.—Ottawa to Kingston and Perth.*

1. Rideau canal.

*Fourth.—Lake Ontario at Trenton to lake Huron at mouth of river Severn.*

1. Trent canal (not completed).

*Fifth.—Ocean to Bras d'Or lakes.*

1. St. Peter's canal.

## RIVER ST. LAWRENCE AND LAKES.

The river St. Lawrence with the system of canals established on its course above Montreal, and the lakes Ontario, Erie, St. Clair, Huron and Superior, with connecting canals, afford a course of water communication extending from the Straits of Belle Isle to Port Arthur, at the head of lake Superior, a distance of 2,217 statute miles. The distance to Duluth is 2,339 statute miles. The distance to Chicago, 2,243 miles.

From the straits of Belle Isle, at the mouth of the St. Lawrence, to Montreal, the distance is 1,003 miles. From Quebec to Montreal, the distance is 160 miles. Owing to the shallowness of the waters on a portion of the river between these two places, particularly through lake St. Peter, vessels drawing more than from ten to twelve feet were formerly barred from passage for the greater part of the season of navigation. In 1826, the question of deepening the channel was first definitely mooted, but it was not until 1844 that any dredging operations were begun. In that year, the deepening of a new straight channel was commenced, but the scheme was abandoned in 1847. In 1851 the deepening of the present channel was begun. At that time the depth of the channel at low water was 10 feet 6 inches. By the year 1869, this depth had been increased to 20 feet, by 1882 to 25 feet, and by the close of 1888 the depth of 27½ feet, at low water, was attained for a distance of 108 miles from Montreal to a point within tidal influence. This work is now being continued by the government of Canada, which in 1888, under the provisions of the Act 51 Vic., ch. 5, of that year assumed the indebtedness. The channel has a minimum width of 300 feet, extending to 550 feet at points of curvature. The channel is lighted and buoyed.

Navigation, which is closed by ice during the winter months, opens about the end of April.

Montreal has by this work been placed at the head of ocean navigation, and here the canal systems of the river St. Lawrence begin, overcoming the various rapids by which the river channel upwards is obstructed, and giving access through the St. Lawrence canals, the Welland canal, the great lakes and the Sault Ste. Marie canal, to the head of lake Superior.

The difference in level between the point on the St. Lawrence, near Three Rivers, where tidal influence ceases, and lake Superior is about 600 feet.

The Dominion canals, constructed between Montreal and lake Superior are the Lachine, Soulanges, Cornwall, Farran's Point, Rapide Plat, Galops, Murray, Welland and Sault Ste. Marie. Their aggregate length is 74 miles; total lockage (or height directly overcome by locks), 553½ feet. The number of locks through which a vessel would pass in its passage from Montreal, at the head of ocean navigation, to the head of lake Superior is 48. The Soulanges canal takes the place of the Beauharnois canal; the latter may be abandoned for navigation purposes.

Communication between lakes Huron and Superior is obtained by means of the Canadian Sault Ste. Marie canal, and also by the St. Mary's Falls canal, situated on the United States side of the river St. Mary. Both these canals are free of toll.

It is important to note that the enlargement of the canals on the main route between Montreal and lake Erie comprises locks of the following minimum dimensions: Length, 270 feet; width, 45 feet; depth of water on sills, 14 feet. The length of the vessels to be accommodated is limited to 255 feet. At Farran's in the canal of that name, the lock is 800 feet long. A similar lock is built at Iroquois on the Galops canal, the object being to pass a full tow at one lockage.

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## LACHINE CANAL.

First construction commenced.....	1821
"      completed.....	1825
First enlargement commenced.....	1843
"      completed.....	1848
Second enlargement commenced.....	1873
"      completed.....	1901
Length of canal.....	8½ statute miles.
Number of locks.....	5
Dimensions of locks.....	270 feet by 45 feet.
Total rise of lockage.....	45 "
Depth of water on sills at two locks.....	18 "
"      "      at three locks....	14 "
Average width of new canal.....	150 "

The old lift locks, 200 feet by 45 feet, are still available, with 9 feet of water on mitre sills.

The canal consists of one channel, with two distinct systems of locks, the old and the enlarged. There are two lock entrances at each end.

The canal extends from the city of Montreal to the town of Lachine, overcoming the St. Louis rapids, the first of the series of rapids which bars the ascent to the river St. Lawrence. They are 1,006 miles distant from the Straits of Belle Isle.

## SOULANGES CANAL.

Construction commenced.....	1892
Open for traffic.....	1899
Length of canal.....	14 statute miles.
Number of locks, lift.....	4
"      guard.....	1
Dimensions of locks.....	280 feet by 45 feet.
Total rise of lockage.....	84 "
Depth of water on sills.....	15 "
Breadth of canal at bottom.....	100 "
"      "      water surface.....	164 "
Number of arc lights.....	219 of 2,000 c.p. each.

The canal extends from Cascade point to Coteau landing, overcoming the Cascade rapids, Cedar rapid and Coteau rapids.

From the head of the Lachine to the foot of the Soulanges, the distance is sixteen miles.

## CORNWALL CANAL.

First commenced, 9 feet.....	1844
First opened.....	1847
Enlargement commenced.....	1897
"      completed.....	1900
Length of canal.....	11 statute miles.
Number of locks.....	6
Dimensions of locks.....	270 feet by 75 feet.
Total rise of lockage.....	48 "
Depth of water on sills.....	14 "
Breadth of canal at bottom.....	90 "
"      "      water surface.....	154 "

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The old lift locks, 200 feet by 55 feet, are also available, with nine feet of water on mitre sills.

From the head of the Soulange to the foot of the Cornwall canal there is a stretch through lake St. Francis of 31 miles, which is being made navigable for vessels drawing fourteen feet.

The Cornwall canal extends past the Long Sault rapids from the town of Cornwall to Dickinson's landing.

### WILLIAMSBURG CANALS.

The Farran's Point, Rapide Plat, and Galops canals are collectively known as the Williamsburg canals.

#### FARRAN'S POINT CANAL.

First commenced, 9 feet.....	1844
Opened.....	1847
Enlargement commenced.....	1897
"      completed.....	1900
Length of canal.....	1½ miles.
Number of locks.....	1
New lock.....	800 feet by 45 feet.
Old lock.....	200 " "
Total rise of lockage.....	3½ feet.
Depth of water on sills of new lock.....	14 "
Depth of water on sills of old lock.....	9 "
Breadth of canal at bottom.....	90 "
Breadth of canal at water surface.....	154 "

From the head of the Cornwall canal to the foot of Farran's Point canal, the distance on the river St. Lawrence is five miles. The latter canal enables vessels ascending the river to avoid Farran's Point rapid, passing the full tow at one lockage. Descending vessels run the rapids with ease and safety.

#### RAPIDE PLAT CANAL.

First commenced, 9 feet.....	1844
First opened.....	1847
Enlargement commenced.....	1884
"      completed.....	1897
Length of canal.....	3½ miles.
Number of locks.....	2
Dimensions of locks.....	270 feet by 45 feet.
Total rise in lockage.....	11½ feet.
Depth of water on sills.....	14 "
Breadth of canal at bottom.....	80 "
Breadth of canal at surface of water.....	152 "

The old lift lock, 200 by 45 feet, is also available, with nine feet of water on mitre sills.

From the head of Farran's Point canal to the foot of Rapide Plat canal there is a navigable stretch of 9½ miles. This canal was formed to enable vessels ascending the river to pass the rapids at that place. Descending vessels run the rapids safely.

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## GALOPS CANAL.

First commenced, 9 feet.....	1844
Opened.....	1846
Enlargement commenced.....	1888
"      completed.....	1903
Length of canal.....	7 $\frac{3}{4}$ miles.
Number of locks.....	3
Dimension of locks (one of which is a guard lock).....	{ 800 by 50. 270 by 45. 303 by 45.
Total rise of lockage.....	15 $\frac{1}{2}$ feet.
Depth of water on sills.....	14 "
Breadth of canal at bottom.....	80 "
Breadth of canal at surface of water.....	144 "

From the head of Rapide Plat canal to Iroquois, at the foot of the Galops canal, the St. Lawrence is navigable 4 $\frac{1}{2}$  miles. The canal enables vessels to overcome the rapids at Pointe aux Iroquois, Point Cardinal and the Galops.

## MURRAY CANAL.

Construction begun.....	1882
Completed.....	1890
Length between eastern and western pier heads.....	5 $\frac{1}{6}$ miles.
Breadth at bottom.....	80 feet.
Breadth at water surface.....	124 "
Depth below lowest known lake level....	11 "
No locks.	

This canal extends through the Isthmus of Murray, giving connection westward between the head waters of the Bay of Quinte and Lake Ontario, and thus enabling vessels to avoid the open lake navigation.

## WELLAND CANAL.

Main line from Port Dalhousie, lake Ontario, to Port Colborne, lake Erie.

	Old Line.	Enlarged or New Line.
Length of canal.....	27 $\frac{1}{2}$ miles.	26 $\frac{3}{4}$ miles
Pairs of guard-gates (formerly 3) .	2	1
Number of locks { lift.....	26	25
guard.....	1	1
Dimensions.....	{ 1 lock 270 x 45 1 lock 200 x 45 1 (tidal) 230 x 45 24 locks 150 x 26 ft. 6 in.	} 270 feet x 45 feet.
Total rise of lockage.....	326 $\frac{3}{4}$ feet.	326 $\frac{3}{4}$ feet.
Depth of water on sills.....	10 $\frac{1}{4}$ "	14 "
Construction commenced, 8 feet.....		1824
"      completed.....		1833
Enlargement commenced, 14 feet.....		1872
"      completed.....		1887

## WELLAND RIVER BRANCHES.

## Length of canal—

Port Robinson cut to river Welland..	2,622 feet.
From the canal at Welland to the river, via lock at Aqueduct....	300 "
Chippewa cut to river Niagara.....	1,020 "
Number of locks—one at Aqueduct and one at Port Robinson.....	2
Dimensions of locks.....	150 by 26½ feet.
Total lockage from the canal at Welland down river Welland.....	10 feet.
Depth of water on sills.....	9 " 10 inches.

## GRAND RIVER FEEDER.

Length of canal.....	21 miles.
Number of locks.....	2
Dimensions of locks.....	1 of 150 by 26½ feet. 1 of 300 by 45 "
Total rise of lockage.....	10 feet.
Depth of water on sills.	9 "

## PORT MAITLAND BRANCH.

Length of canal.....	1¾ miles.
Number of locks.....	1
Dimensions of locks.....	185 feet by 45 feet.
Total rise of lockage.....	7 "
Depth of water on sills.....	7½ "

The Welland canal has two entrances from lake Ontario, at Port Dalhousie, one for the old, the other for the new canal.

From Port Dalhousie to Allanburg, 11½ miles, there are two distinct lines of canal in operation, the old line and the enlarged or new line.

From Allanburg to Port Colborne, a distance of 15 miles, there is only one channel, the old canal having been enlarged.

From the head of the Welland canal there is a deep water navigation through lake Erie, the Detroit river, lake St. Clair, the St. Clair river, lake Huron and river St. Mary to the Sault canal, a distance of about 580 miles. From the Sault the distance through lake Superior to Port Arthur is 274 miles, and to Duluth 397 miles.

## SAULT STE. MARIE CANAL.

Construction commenced.....	1888
Opened for traffic.....	1895
Length of canal, between the extreme ends of the entrance piers.....	7,472 feet.
Number of locks.....	1
Dimensions of locks.....	900 " by 60 feet.
Depth of water on sills (at lowest known water level).....	18 " 3 inches.
Total rise or lockage.....	18 "
Breadth of canal at bottom.....	141 " 8 inches.
Breadth at surface of water.....	150 "

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This canal has been constructed through St. Mary's island, on the north side of the rapids of the river St. Mary, and, with that river, gives communication on Canadian territory between lakes Huron and Superior. The masonry pier of the bridge carrying the Canadian Pacific Railway over the canal, which stood in the channel of the canal, forming an obstruction to navigation, has been removed; the swing now spanning the full width of the channel or prism of the canal.

## MONTREAL, OTTAWA AND KINGSTON.

This route extends from the harbour of Montreal to the port of Kingston, passing through the Lachine canal, the navigation section of the lower river Ottawa, and the Ottawa canals, to the city of Ottawa; thence by the river Rideau and the Rideau canal to Kingston, on lake Ontario—a total distance of  $245\frac{5}{8}$  miles.

After leaving the Lachine canal the works constructed to overcome difficulties of navigation are:—

*Ottawa River Canals.*

The Ste. Anne's lock.  
Carillon canal.

Grenville canal.  
Rideau canal.

The total lockage (not including that of the Lachine canal) is 509 feet (345 rise, 164 fall)—and the number of locks is 55.

The following table exhibits the intermediate distances from Montreal harbour:—

Sections of Navigation.	Interme- di ate Distance.	Total Distance from Montreal.	
		Miles.	Miles.
The Lachine canal.....	8 $\frac{1}{2}$		23 $\frac{1}{2}$
From Lachine to Ste. Anne's lock.....	15		23 $\frac{5}{8}$
Ste. Anne's lock and piers.....	$\frac{1}{8}$		50 $\frac{5}{8}$
Ste. Anne's lock to Carillon canal.....	27		51 $\frac{3}{8}$
The Carillon canal.....	$\frac{3}{4}$		57 $\frac{5}{8}$
The Carillon to Grenville canal.....	6 $\frac{1}{4}$		63 $\frac{3}{8}$
The Grenville canal.....	$5\frac{1}{4}$		119 $\frac{3}{8}$
From the Grenville canal to entrance of Rideau navigation.....	56		245 $\frac{5}{8}$
Rideau navigation ending at Kingston.....	126 $\frac{1}{4}$		

## STE. ANNE'S LOCK.

	Old Lock.	New Lock.
Construction commenced.....		1814
“ completed.....		1816
Rebuilt of wood.....		1833
“ in masonry.....		1843
Length of canal.....	$\frac{1}{8}$ mile.	$\frac{1}{8}$ mile.
Number of locks.....	1	1
Dimensions of locks.....	190 x 45 feet.	200 x 45 feet.
Total rise of lockage.....	3 feet.	3 feet.
Depth of water on sills.....	6 “	9 “

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This work, with guide piers above and below, surmounts the Ste. Anne's rapids between Ile Perrot and the head of the Island of Montreal, at the outlet of that portion of the river Ottawa which forms the lake of Two Mountains, 23½ miles from Montreal harbour.

### THE CARILLON CANAL.

Construction commenced.....	1819
“ completed.....	1833
Enlargement commenced.....	1871
“ completed.....	1887
Length of canal.....	$\frac{3}{4}$ mile.
Number of locks.....	2
Dimensions of locks.....	200 x 45 feet.
Total rise of lockage.....	16 feet.
Depth of water on sills.....	9 “
Breadth of canal at bottom.....	100 “
Breadth of canal at water surface.....	110 “

This canal overcomes the Carillon rapids.

From Ste. Anne's lock to the foot of the Carillon canal there is a navigable stretch of 27 miles, through the lake of Two Mountains and the river Ottawa.

By the construction of the Carillon dam across the river Ottawa the water at that point is raised 9 feet, enabling the river above to be used for navigation.

### GRENVILLE CANAL.

Construction commenced.....	1819
“ completed.....	1833
Enlargement commenced.....	1871
“ completed.....	1887
Length of canal.....	$5\frac{3}{4}$ miles.
Number of locks.....	5
Dimensions of locks.....	200 x 45 feet.
Total rise of lockage.....	$43\frac{3}{4}$ feet.
Depth of water on sills.....	9 “
Breadth of canal at bottom.....	40 to 50 feet.
Breadth of canal at surface of water.....	50 to 80 “

This canal, by which the Long Sault rapids are avoided, is about 56 miles below the city of Ottawa, up to which point the river Ottawa affords unimpeded navigation.

### RIDEAU NAVIGATION.

Construction commenced.....	1826
“ completed.....	1832

The Rideau system connects the river Ottawa, at the city of Ottawa, with the eastern end of lake Ontario, at Kingston.

Length of navigation waters.....  $126\frac{1}{4}$  miles.

Number of locks going from Ottawa to  
Kingston..... 35 ascending.  
14 descending.

Total lockage..  $457\frac{1}{2}$  feet.  $292\frac{1}{2}$  rise and  
 $165\frac{1}{4}$  fall, at low water,

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Dimensions of locks.....	134 x 33 feet.
Depth of water on sills.....	5 feet.
Navigation depth through the several reaches.....	5 "
Breadth of canal reaches at bottom.....	60 feet in earth. 54 " in rock.
Breadth of canal at surface of water....	80 " in earth.

## PERTH BRANCH.

Construction commenced.....	1883
“ completed.....	1892
Length of canal.....	7 miles.
Number of locks.....	2
Dimensions of locks.....	134 feet x 33 feet.
Total rise of lockage.....	26 "
Depth of water on sills.....	5 " 6 inches.
Length of dam.....	200 "
Breadth of canal at bottom.....	40 " in rock. 60 " in clay.
Breadth of canal at surface of water....	80 "

The Perth branch of the Rideau canal affords communication between Beveridge's bay, on lake Rideau and the town of Perth.

The summit level of the Rideau system is at upper lake Rideau, but several of the descending reaches are also supplied by waters which have been made tributary to them. The following description gives the source of supply:—

From the summit, the route towards Ottawa follows the Rideau river, and that towards Kingston follows the river Cataraqui. The supply of water for the canal is derived from the reserves given in detail below.

These may be divided into three systems, viz.:—

1. The summit level, supplied by the Wolfe lake system.  
2. The eastern descending level to Ottawa, supplied by the river Tay system, discharging into lake Rideau.

3. The southwest descending level to Kingston, supplied by the Mud lake system formerly known as the Devil lake system, discharging into lake Openicon.

Lake Openicon receives the waters of Buck lake and Rock lake.

All these waters on the descending level, supplemented by those of lake Loughboro', flow into Cranberry lake, which, discharging through Round Tail outlet, forms the river Cataraqui. The river, rendered navigable by dams at various points, affords a line of navigation to Kingston.

## RICHELIEU AND LAKE CHAMPLAIN.

This system, commencing at Sorel, at the confluence of the rivers St. Lawrence and Richelieu, 46 miles below Montreal, extends along the river Richelieu, through the St. Ours lock to the basin of Chambly; thence by the Chambly canal, to St. Johns, and up the river Richelieu to lake Champlain. The distance from Sorel to the boundary line is 81 miles.

At Whitehall, the southern end of lake Champlain is entered, and connection is obtained with the river Hudson, by which the city of New York is directly reached. From the boundary line to New York the distance is 330 miles.

The following table shows the distances between Sorel and New York:—

Section of Navigation.	Intermediate Distance.	Total Distances.
	Miles.	Miles.
Sorel to St. Ours lock	14	14
St. Ours lock to Chambly canal.....	32	46
Chambly canal.....	12	58
Chambly canal to boundary line.....	23	81
Boundary line to Champlain canal.....	111	192
Champlain canal to junction with Erie canal.....	66	258
Erie canal, from junction to Albany	7	265
Albany to New York	146	411

### ST. OURS LOCK DAM.

Construction commenced.....	1844
“ completed.....	1849
Length.....	$\frac{1}{8}$ mile.
Number of locks.....	1
Dimensions of lock.....	200 feet by 45 feet.
Total rise of lockage.....	5 “
Depth of water on sills.....	7 feet at low water.
Length of dam in eastern channel.....	300 “
Length of dam in western channel.....	690 “

At St. Ours, 14 miles from Sorel, the river Richelieu is divided by a small island into two channels. The St. Ours lock is in the eastern channel.

There is a navigable depth in the Richelieu of 7 feet between St. Ours lock and Chambly basin, a distance of 32 miles.

### CHAMBLY CANAL.

Construction commenced.....	1831
“ completed.....	1843
Length of canal.....	12 miles.
Number of locks.....	9
Dimensions of locks:—	
Guard lock, No. 1, at St. Johns.....	122 feet.
Lift “ 2.....	124 “
“ “ 3, 4, 5, 6.....	118 “
“ “ 7, 8, 9 combined.....	125 “
Total rise or lockage.....	74 “
Depth of water on sills.....	6 $\frac{1}{2}$ “
Breadth of canal at bottom.....	36 “
Breadth of canal at surface of water.....	60 “

This canal succeeds the 32 miles of navigable water between St. Ours lock and Chambly basin. The canal overcomes the rapids between Chambly and St. Johns.

## TRENT CANAL.

The term 'Trent canal' is applied to a series of water stretches, which do not, however, form a connected system of navigation, and which, in their present condition, are efficient only for local use. By various works this local use has been extended, and by others, now in progress and contemplation, this will become a through route between lake Ontario and lake Huron.

The series is composed of a chain of lakes and rivers, extending from Trenton, at the mouth of the river Trent, on the bay of Quinte, lake Ontario, to lake Huron.

Many years ago the utilizing of these waters for the purpose of through water communication between lake Huron and lake Ontario was projected.

The course, as originally contemplated and modified, is as follows:—

Through the river Trent, Rice lake, the river Otonabee and lakes Clear, Stony, Lovesick, Deer, Buckhorn, Chemong, Pigeon, Sturgeon and Cameron to lake Balsam, the summit water, about 155 miles from Trenton; from lake Balsam by a canal and the river Talbot to lake Simcoe; thence by the river Severn to Georgian bay, lake Huron; the total distance being about 200 miles of which only about 15 or 20 miles will be actual canal.

The full execution of the scheme, commenced by the Imperial Government in 1837, was deferred. By certain works, however, below specified, sections of these waters have been made practicable for navigation, and the whole scheme is now being carried out. A branch of the main route, extending from Sturgeon lake south, affords communication with the town of Lindsay, and, through lake Scugog to Port Perry, a distance of 174 miles from Trenton.

The following table gives the distance of navigable and unnavigable reaches:

From Trenton, bay of Quinte to Nine Mile rapids:—

Nine Mile rapids to Percy landing.....	19 $\frac{1}{2}$	9
Percy landing to Heeley's Falls dam.....	—	14 $\frac{1}{2}$
Heeley's Falls dam to Peterborough.....	51 $\frac{3}{4}$	—
Peterborough to Lakefield.....	—	9 $\frac{1}{2}$
Lakefield to a point across Balsam lake ..	61	—
	132 $\frac{1}{4}$	33

Total distance, bay of Quinte to a point across Balsam lake 165 $\frac{1}{4}$

From Sturgeon point on Sturgeon lake, 48 $\frac{3}{4}$  miles from Lakefield, the branch through the town of Lindsay to Port Perry at the head of lake Scugog..... 27

The works by which the Trent navigation has been improved comprise canals, with locks and bridges, at Young's point, Burleigh rapids, Lovesick, Buckhorn rapids, Bobcaygeon, Fenelon falls and Rosedale; also dams at Lakefield, Young's point, Burleigh falls, Lovesick, Buckhorn, Bobcaygeon and Fenelon falls. By these works there is afforded communication between Lakefield, 9 $\frac{1}{2}$  miles from Peterborough, and Balsam lake, the headwaters of the system; opening up a total of about 160 miles of direct and lateral navigation.

At Lakefield, 9 $\frac{1}{2}$  miles from Peterborough, the dam at the head of the Nine mile rapids of the river Otonabee maintains navigation on Lake Katchewannoe up to Young's point.

At Young's point, 5 miles from Lakefield, the dam between Lake Katchewannoe and Clear lake controls the water level through Clear and Stony lakes up to the foot of the Burleigh canal.

At Burleigh rapids, 10 miles from Young's point, a canal, about  $2\frac{1}{4}$  miles in length, passes the Burleigh and Lovesick rapids, and gives communication between Stony lake and Deer bay.

At Buckhorn rapids, 7 miles from Burleigh rapids, there is a canal about one-fourth of a mile long.

At Bobcaygeon,  $15\frac{3}{4}$  miles from Buckhorn rapids, a dam, 553 feet long, controls the water level to Fenelon falls.

At Fenelon falls, 15 miles from Bobcaygeon, a canal about one-third of a mile in length connects Sturgeon lake with Cameron lake.

The following is a list of the locks, with their dimensions:—

1 Lock at Rosedale (maintained by the Ontario government), 16				
	x 30' x 4' 6" to 6' 6" depth water on mitre sill.			
2 Locks at Fenelon.....	134'x33'x5' 0" to 7' 6" deep water on mitre sill .			
1 " Lindsay.....	134'x33'x5' 0" to 7' 6" "	"	"	"
1 " Bobcaygeon..	134'x33'x5' 8" to 7' 0"	"	"	"
1 " Buckhorn.....	134'x33'x5' 0" to 9' 0"	"	"	"
1 " Lovesick.....	134'x33'x5' 0" to 9' 4"	"	"	"
2 " Burleigh.....	134'x33'x6' 0" to 8' 0"	"	"	"
1 " Young's pt...	134'x33'x5' 0" to 14' 0"	"	"	"
1 " Peterborough	134'x33'x5' 0" to 10' 0"	"	"	"
1 " Hastings.....	134'x33'x7' 0" to 10' 6"	"	"	"
1 " Chisholms....	134'x33'x5' 0" to 8' 6"	"	"	"
<hr/>				
	12			

### ST. PETER'S CANAL, CAPE BRETON.

Construction commenced.....	1854
" completed.....	1869
Enlargement begun.....	1875
" completed.....	1881
Length of canal, about 2,600 feet.	
Breadth at water line.....	50 feet.
Lock.....	One tidal lock, 4 prs. of gates.
Dimensions.....	200 feet by 48 feet.
Depth of water on sills.....	18 feet at lowest water.
Depth through canal.....	19 "
Extreme rise and fall of tide in St.	
Peter's bay.....	7 "

This canal connects St. Peter's bay on the northern side of Cape Breton, Nova Scotia, with the Bras d'Or lakes. It crosses an isthmus half a mile in width and gives access to the Atlantic.

### BEAUHARNOIS CANAL.

Construction begun.....	1842
" completed.....	1845
Length of canal.....	12 statute miles.
Number of locks.....	9
Dimensions of locks.....	200 feet by 45 feet.
Total rise or lockage.....	$82\frac{1}{2}$ "
Depth of water on sills.....	9 "
Breadth of canal at bottom.....	80 "
Breadth of canal at water surface.....	120 "

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As the new Soulanges canal is now opened for navigation, the Beauharnois canal is abandoned for navigation purposes.

## EARLIER CANALS.

A system of three canals preceded the Beauharnois. These were:—

## COTEAU DU LAC CANAL.

Construction.....	1779
“ completed.....	1780

## SPLIT ROCK CANAL.

Construction commenced.....	1779
“ completed.....	1780

## CASCADE POINT CANAL.

Construction commenced.....	1782
“ completed.....	1783

The locks were 20 x 6 feet, and provided for a draft of 2 feet. In 1814 the work of widening them to 12 feet was begun, and finished in 1817.

Two canals were also constructed off Burlington bay, Ontario. They were:

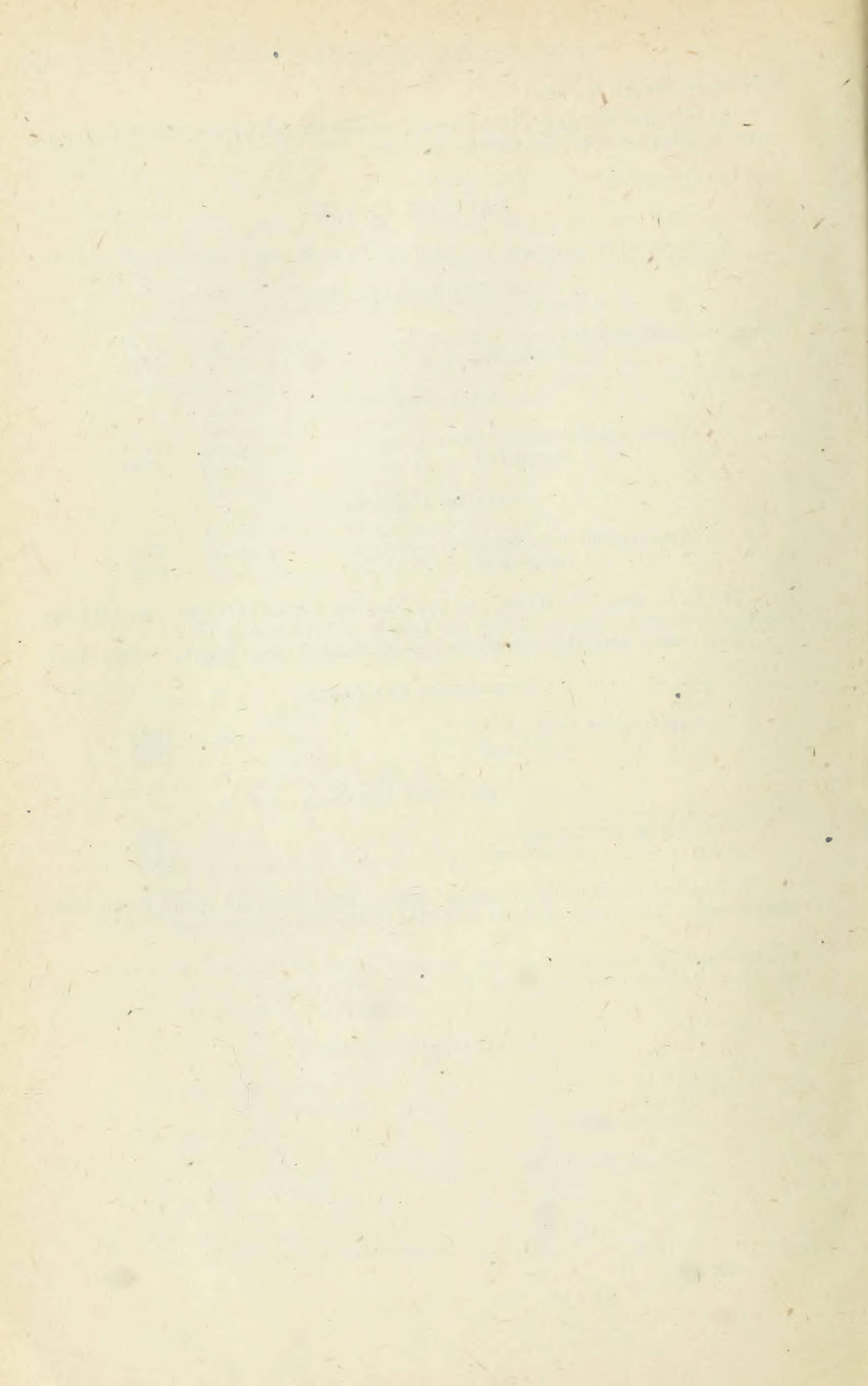
## BURLINGTON BAY CANAL.

Construction commenced.....	1825
“ completed.....	1832

## DESJARDINS CANAL.

Construction commenced.....	1826
“ completed.....	1837

Neither of these canals required locks. They have for many years been abandoned. The depth of water provided in the first instance was  $7\frac{1}{2}$  feet.



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